Variable Object Clitic Placement: Evidence from European and Brazilian Portuguese

Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

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2015

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ABSTRACT

Variation in object clitic placement in Ibero-Romance has been of great interest to researchers working on Spanish and Portuguese (cf. Davies 1995, Davies 1997, Andrade 2010a, Andrade 2010b, Andrade 2010c, Schwenter & Torres Cacoulllos 2010, Schwenter & Torres Cacoulllos 2014a, Barnes, González Lópex & Schwenter 2014, *inter alia*).

Among these, European Portuguese (EP) alone displays generalized postverbal pronominal object clitic placement, with preverbal placement licensed in the presence of proclisis triggers. These triggers include negation, subordinating conjunctions, quantifiers, WH operators, and certain adverbs (Barrie 2000, Cunha & Cintra 2002, Perini 2002, *inter alia*). However, these normatively proclisis environments are loci of considerable variation in clitic placement, as seen below in (1) and (2).

(1) *Não o* podia ter esquecido. [UHPVC-Simões]

She couldn’t have forgotten **him**.

(2) *Não* podia deixá-lo assim, morto e esquecido de todos. [ANT-Carvalho]

She couldn’t leave **him** like that, dead and forgotten by everyone.

Brazilian Portuguese (BP), on the other hand, is a predominantly proclitic variety with variation largely related to the form of the object clitic (Simões 2006), possibly influenced by the same proclisis triggers affecting EP (cf. Cunha & Cintra 2002, Perini...
2002). The present study builds on prior work to determine the factors governing the variation in placement of object clitics in the presence of three trigger words that reflect different categories of phonologically strong function words (cf. Vigário & Frota 1998)—*que* ‘that’, *não* ‘no; sentential negation’, and *talvez* ‘perhaps’—with a focus on non-normative enclisis, as seen in example (2).

Using data collected from written and oral sources found in the *Corpus do Português* (Davies & Ferreira 2006–), I examine 2554 tokens from EP and 810 from BP following one of the three trigger words using mixed effects regression. The results suggest that complex multi-verb predicates positively correlate with non-normative clitic placement in EP, while in BP clitic placement before the auxiliary verb is preferred when the object is human. Oral modes of communication also show the most non-normative enclisis in EP, while source document year is a key factor affecting clitic placement in BP. Furthermore, structural priming affects the selection of enclitics in BP and anaphoric direct object enclitics in EP, with the proclisis triggers displaying very little effect on BP clitic placement.

In EP, clitic placement in complex predicates is also strongly correlated to frequency: highly frequent governing verbs result in normative proclisis and less frequent finite forms result in non-normative enclisis. Unlike in Spanish, the effect of verbal frequency in EP—and to a lesser extent BP—points toward analogical change resulting in the generalized placement found in the language at large. In essence, the findings of this dissertation suggest that EP, BP, and Spanish are all moving toward stabilization of clitic placement, but in Portuguese the mechanism causing the change is analogy, while in Spanish it is grammaticalization. Furthermore, unlike Spanish varieties, constructional
effects rather than discourse pragmatic factors strongly influence clitic placement patterns in Portuguese.
DEDICATION

To L, L (S), M, and K – for all your support and companionship.
ACKNOWLEDGMENTS

I have received a great amount of support from others while working on this project. First and foremost, I would like to extend my gratitude to my advisor, Dr. Scott Schwenter, whose work in variationist sociolinguistics inspired me early in my graduate studies. I am grateful for his encouragement and inspiration throughout my graduate career, which led to my interest in this topic. Our weekly meetings, during which I could toss around ideas and receive his guidance, insight, and feedback throughout the data analysis and writing process, were especially helpful. I owe much of my academic formation and scholarship to his support, and for that I am eternally grateful.

I would also like to thank Drs. Terrell Morgan and Janice Aski, both of whom asked important questions early on as I was planning this study. Without their prompting to consider the theoretical concerns and the connections to other Romance varieties, as well as their detailed feedback at various points in this process, this project would not have been as fruitful.

My colleagues and peers in the Department of Spanish and Portuguese have also been invaluable to my development and accomplishments as a scholar. I extend my thanks first to Mary Beaton, who has been a wonderful research partner since very early in our graduate careers. Our domestic and international travels together for data collection and conference presentations, as well as our collaborations for publications,
have been very important in my development as a traveler, presenter, scholar, and writer. Christy García has been a great source of positivity and support throughout my graduate career, always willing to help in any way she could. Becca Mason has always had some humor to share with me and has celebrated each step of my progress, however small. I am also appreciative of the support of my colleagues around Hagerty Hall, especially Sonia Barnes, Meghan Dabkowski, Mary Johnson, Jenny Barajas, Whitney Chappell, and Justin Peake, who have helped with me resolve issues in R, given me feedback on projects, and offered advice throughout my time at Ohio State.

Finally, I would like to thank my family for their encouragement through the years. My parents, who have always been my biggest supporters in academic pursuits, have given me the best educational opportunities possible and have helped me navigate the system when I was unable to do so alone. My brother, Jonathan, who as a fellow linguist shares my passion for the field, has joined me in interesting late-night conversations about this dissertation and other linguistic topics. And last but not least, I owe enormous gratitude to Lizzie Gordon, who has been my rock at every step of my graduate education and who has always shown unwavering belief in me.
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CHAPTER 1. INTRODUCTION

1.1 DESCRIPTION OF THE PHENOMENON

Clitics have been of great interest in linguistic study for nearly a century and a half, and numerous scholars have provided important insights into the cross-linguistic patterns found across Romance clitic systems (Meklenberg Salvesen & Helland 2013). The term ‘clitic’ has been used to refer to a diverse set of units which all depend syntactically, morphologically, or phonologically on adjacent material (Nevis et al. 1994). How and where these clitics lean on their hosts has been widely debated in the literature on Portuguese and Spanish, since pre- and postverbal placements are available in both languages, and shifts in both host selection and placement patterns have been recorded historically (Nishida 1996, Wanner 1996, Galves, Moraes & Ribeiro 2005, Galves, Britto & Paixão de Sousa 2005). Falling between syntax and phonology, clitics have received special attention with respect to their status as bound morphemes or free words. This question regarding the theoretical status of clitics will be discussed in §2.1, with particular reference to the clitics of interest to the current work including the class of pronominal objects with verbal hosts in two World Portuguese varieties.

This dissertation will focus on the placement of clitics in both simple and complex predicates in European Portuguese and exclusively in complex predicates in Brazilian Portuguese. With respect to complex predicates, prior work (cf. Myhill 1988,
Davies 1995, Davies 1997, Andrade 2010a, Andrade 2010b, Andrade 2010c) has focused
on clitic placement in ‘restructuring’ contexts as a result of clitic climbing. This
phenomenon that involves the presumed movement of clitics from low in the syntactic
phrase structure to a higher position is considered in great detail §2.2 and will be further
discussed as it relates to the present study in Chapters 4 and 5.

In contrast with complex predicates, simple predicates consisting of a single verb
in European Portuguese (EP)—and to a significantly lesser extent in Brazilian Portuguese
(BP)—allow for variation in placement that, unlike other Romance languages, is not tied
to the finiteness of the verb. These placement patterns as presented by grammars, formal
analyses, and variationist work are laid out in §2.2, §2.3, and §2.4.

1.2 FOCUS OF THE STUDY
Preliminary work on variable object clitic placement in Portuguese and related Spanish
varieties has shown that both contemporary and historical data display variation,
suggesting that the grammar of clitic placement has been and is currently in a state of
either stable variation or change in progress. This prior work has shouldered the task of
detailing the internal and external factors affecting the variation. In Spanish, prior
analysis includes Myhill’s (1988) study that suggests the importance of relative animacy
between subjects and objects, as well as semantic class restrictions, and Davies’ (1995)
study showing differences in rates of clitic climbing by verb, clitic type, animacy,
preceding element, and region. These studies offer common threads of evidence for clitic
placement and the environmental properties that potentially contribute to a speaker’s
selection of one placement option over another. For instance, Davies (1995) finds that
clitics with animate referents have a higher rate of clitic climbing, resulting in proclisis or preverbal placement, than those with inanimate referents; Myhill (1988), on the other hand, suggests that the relative animacy of the clitic with respect to the subject is the crucial factor, with clitics that are more animate than their phrasal subjects showing the highest rates of clitic climbing. Moreover, these prior studies also find differences in rates of clitic placement based on the finite or governing verb, which Myhill (1988) attributes to semantic class and Davies (1995) relates to frequency. Both of these novel findings, presented more in depth in §2.4.2.2, offer insights into potential conditioning factors on clitic placement in Spanish and related Portuguese varieties, providing a starting point from which other scholars have been able to carry out dialect-specific socio-pragmatic analyses.

While Myhill’s (1988) and Davies’ (1995) work relies entirely on token counts and descriptive statistics, more recent work on the clitic placement by Schwenter & Torres Cacoullos (2014a, 2014b) uses modern inferential statistics and other powerful tools to analyze the variation in clitic placement in a single variety of Spanish. Looking at Mexican Spanish, these authors explore exclusively anaphoric third person objects and provide an account in which animacy and verbal construction type are key predictors of the variation. In contrast with the prior work by Myhill (1988) and Davies (1995), they suggest that the differences by verb are related to the extent to which the governing verb has undergone grammaticalization processes to become a fused unit within the syntax. These authors also explore discourse-level factors, including innovative operationalized topicality measures, which interact with animacy constraints.

In contrast with the scholarship on Spanish clitic placement, the work on variable
object clitic placement in Portuguese is quite limited, since most EP scholars focus on one of two primary issues: a) the theoretical status of clitics in this variety within the morphology or syntax (cf. §2.1), or b) a way to account for the diversity of the set of so-called proclisis triggers within a unified theoretical approach. However, recent preliminary variationist work offers a window into potential internal and external conditioning factors of clitic placement in this variety. Like Schwenter & Torres Cacoulllos (2014a), Andrade (2010c) employs logistic regression to study the factors contributing to clitic climbing in EP, finding that clitic type, frequency, register, and presence of a trigger word all affect the rate at which clitic climbing is found in this variety. The results of this study are discussed in §2.4.2.1. Meanwhile, BP clitic placement patterns are largely unstudied, although the tendency to follow a single rule resulting in proclisis to the lexical verb has been reported for modern BP (cf. Cyrino 1990, Cyrino 1993, Simões 2006). Nevertheless, grammars of BP suggest that this variety generally follows normative EP rules with respect to the proclisis triggers, with the possibility of variation (Cunha & Cintra 2002, Perini 2002, Mateus et al. 2003). These patterns are discussed in §2.3.2 using descriptions available in grammars and formal accounts, as well as the few studies that include descriptions of the basic patterns with data-driven evidence (Galves, Moraes & Ribeiro 2005, Cyrino 1993). With only these basic descriptions available for BP, this dissertation aims to offer a descriptive and analytical account of clitic placement in environments containing proclisis triggers in BP using corpus data and inferential statistical methods to determine the predictors of the variation.

Although clitic climbing in EP is somewhat different than in Spanish (§2.2),
similarities in the patterns found in these studies are suggestive of similar structural changes at work in both languages. This dissertation uses the aforementioned works as a starting point and seeks to add to this scholarly discussion with additional evidence and updated statistical analyses using mixed effects regression and the conditional inference tree tool to illustrate the effects of and interactions between the various independent variables (cf. §3.1.3). As in previous studies, I will consider factors such as verbal frequency, presence of trigger words, animacy, subject expression, topicality measures for third person anaphoric forms, and register. Furthermore, I will consider only environments with proclisis triggers (described in detail in §2.3) in my analysis of Portuguese data. Finally, I will consider simple predicates in addition to complex ones in the European Portuguese analyses, with the expectation that they will provide further evidence for the variable rules that govern usage patterns.

1.3 Research Questions

To assess what factors influence the variation in the selection of different clitic placements in contexts that have been described as proclitic contexts in EP and BP, I use a quantitative variationist approach and consider the discourse pragmatic and other contextual effects on the variation. Accordingly, this dissertation addresses the following research questions:

1) To what extent do grammatical factors—such as subject expression, subject person and number, verbal tense and mood, clitic type, verbal construction type, and trigger word—play a role in the variation in each variety?

2) To what extent do external factors, such as document register and language variety,
suggest social or dialectal differences in placement patterns?

3) Are there differences based on the so-called proclisis trigger word between EP and BP? If so, does this point toward the either the maintenance or loss of the phonological status of clitics in these varieties?

4) To what extent is the purported generalization of enclisis in EP related to frequency effects? How does this play out for both simple and complex predicates? Does looking at frequency as a continuous factor provide evidence for the existence of a gradient effect on placement?

5) Are the placement patterns in BP similarly related to frequency effects? If so, is there evidence for the same kind of language change and/or stable variation as found in EP?

6) To the extent that verbal frequency is a factor affecting the variation, do the patterns suggest analogical change or grammaticalization? Does this differ by language?

7) What is the role, if any, of syntactic priming (i.e. persistence) for clitic placement in each variety?

8) Do topicality measures such as referential distance (a backward-looking measure) and topic persistence (a forward-looking measure) play a role in placement of anaphoric direct object clitics in EP? If so, do they align with the assertions made about topicality (e.g. Myhill 1988, Andrade 2010c) and do they parallel the data from other related Western Romance varieties (Schwenter & Torres Cacoullos 2014a)?

9) What are the connections between clitic placement in usage in proclisis-inducing contexts to the findings in other languages such as Spanish (Schwenter & Torres Cacoullos 2014a, Schwenter & Torres Cacoullos 2014b, Barnes, González López, and Schwenter 2014)?
In Chapter 2, I lay out the relevant background for the current project. This chapter contains a description of the clitic object systems in Romance languages, and especially Portuguese and Spanish. In this chapter, I will also discuss related pronominal phenomena in these languages, including that of object expression. Theoretical questions including the role grammaticalization and frequency are presented. Finally, this chapter also reviews work on variation in clitic object systems in Portuguese and Spanish, with an examination of both internal and social factors that have been shown to affect pronominal variation in these languages.

The following chapter offers an outline of the methodology to be employed in this dissertation. I begin by describing the data used in the present work. I continue by providing insight in the variationist framework and the value of quantitative analysis for the study of morphosyntactic phenomena. A thorough review of variationist statistical tools follows, along with a justification of the use of mixed effects regression and the complementary random forest and conditional inference tree tools. In this chapter, I also detail the dependent and independent variables considered in my analyses of object clitic placement in each language, and the pertinent hypotheses are explained.

Chapter 4 begins the presentation of results. This chapter focuses on European Portuguese, showing the role of environmental and discourse factors, including persistence and topicality effects, the role of verbal frequency, and the role of the preverbal trigger. These results provide a foundation against which to compare the results for Brazilian Portuguese, which are presented in Chapter 5. In Chapter 6, the results of for both EP and BP are analyzed together, with a discussion of the similarities and differences between the conditioning factors for object clitic placement and the broader
implications of the results in the realm of morphosyntactic change and cross-linguistic variation. Finally, Chapter 7 contains a brief summary of the main findings and future directions for work in this area.
CHAPTER 2. CLITICS, OBJECTS, AND VARIATION

Clitics have received considerable attention from linguists beginning with descriptive analyses in the late 19th century by Wackernagel and Tobler-Mussafia, providing the necessary groundwork for more recent theoretical analyses starting in the 1970s with Kayne (1975) and Zwicky (1977) (Meklenborg Salvesen & Helland 2013). Clitics are understood to be those units that share properties with a variety of grammatical categories and crucially depend on other units through syntax, morphology or morphophonology, typically leaning phonologically on an adjacent or nearby constituent due to their prosodically weak nature (Nevis et al. 1994). However, it should be noted that clitics are not considered a traditional grammatical category but rather a grouping of units that encompass a wide range of forms and phenomena (ibid.). Although clitics are heterogeneous by nature, they share certain tendencies and restrictions. For example, early scholars noted that clitics are regularly restricted from first position in a clause or phonological phrase, following what is known as the Tobler-Mussafia Law, and instead tend to occur in second position in a clause, thus following Wackernagel’s Law (cf. Madeira 1993, Barbosa 1996, Meklenborg Salvesen & Helland 2013). In the most traditional sense, clitics have been defined as having the following shared characteristics laid out by Kayne (1975) (in Meklenborg Salvesen & Helland 2013):
Clitics tend to appear in special positions that differ from full phrases.

b. Clitics cannot receive stress.

c. Clitics require a host to lean on, and they cannot be separated from this host.

d. Clitics cannot be modified (e.g. by an adjective; compare Portuguese até eu, até ele but *até me [Luís & Sadler 2003]).

e. Clitics cannot be coordinated the way lexical items and tonic pronouns can be (e.g. consider Spanish él y yo, but *lo y me).

In this chapter, I will address questions regarding the theoretical status of clitics and the processes to which clitics are often subject. In the following subsections, I will discuss properties of Romance clitics and their theoretical status, followed by an introduction to what has been described as ‘clitic climbing’ and its realization in Romance languages.

2.1 Clitics in Romance languages

Clitics in the Romance languages consist of various units, including partitives, adjectives, and pronominal objects. The group of pronominal object clitics, which will be the focus of this work, developed through grammaticalization processes that occurred separately in the history of each Romance language, resulting in varied forms and placement patterns.

As Russi (2008, Ch. 2) points out, clitics even in a single language—for example, Italian—can reflect a group of units with similar functions but at different stages of grammaticalization. This observation holds true for clitics in other Romance varieties.

The literature distinguishes between simple and special clitics (cf. Russi 2008,
Meklenborg Salvesen & Helland 2013). The prosodically weak simple clitics are derived transparently from corresponding stressed forms (e.g., I’d < I had, where the auxiliary becomes a clitic), and they differ from affixes in that they do not readily attach to different kinds of words to create new words or forms. Special clitics, on the other hand, are not transparently derivable from stressed strong forms, though they do share the property of prosodic deficiency\(^2\) with simple clitics. Pronominal object clitics in the Romance languages fall into the category of special clitics because they are not derived from stressed tonic or subject forms but rather generally display complementary distribution to the tonic forms.

The study of special clitics in the Romance languages has been focused on three primary issues: 1) the grammaticalization and current theoretical status of clitics as either affixes or free syntactic units; 2) clitic placement patterns, especially as they relate to the question of theoretical status; and 3) the internal ordering of elements within clitic clusters. In the following subsections, I will discuss the question of the theoretical status of Romance clitics before moving on to questions of clitic placement and so-called ‘clitic climbing’ in §2.2.

### 2.1.1 Affix or independent syntactic form?

One important question in the literature deals with whether clitics function as affixes, because of their shared properties with inflectional features, or as bound words that function in the syntax (Nevis et al. 1994). In the following sections, I explore the arguments made for both affixal and syntactic treatments of clitics.

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\(^2\) By ‘prosodic deficiency’, I mean that these forms cannot bear lexical or contrastive prosodic stress, nor can they occur in a position that is not adjacent to a lexically stressed constituent.
2.1.2 Affixal properties

The debate over the status of clitics as affixes in the morphology or bound words that function in the syntax has been ongoing (Nevis et al. 1994). In this section, I will explore the morphological side of this debate, focusing on the similarities and differences between clitics and affixes.

Clitics have traditionally been distinguished from affixes in the following ways:

(2) Differences between clitics and affixes (Zwicky & Pullum 1983, Zwicky 1985)

a. **Selectional properties**: Affixes have a higher degree of selectivity with respect to their stems, while clitics have a lower degree of selectivity with respect to their hosts.

b. **Combinatory arbitrariness**: Affixed words are more likely to have arbitrary gaps in what they can attach to than clitics.

c. **Morphological idiosyncrasy**: Affixes are more likely to display morphophonological idiosyncrasies than clitics.

d. **Semantic idiosyncrasy**: Affixes are more likely to have semantic idiosyncrasies than clitics.³

e. **Syntactic (attachment) behavior**: Clitics can be attached to word forms following the attachment of affixes and other clitics, but affixes cannot attach to the periphery of a clitic.

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³ As expected, clitics do not show much in the way of idiosyncratic semantic behavior in Romance languages. As pointed out by Russi (2008), the presence of true pronominal clitics does not alter the semantics of the host verb, though the presence of lexicalized clitics does. Because of this difference between lexicalized and non-lexicalized verb-clitic combinations, I do not consider Romance clitics to be a source of semantic idiosyncrasy.
The differences laid out above have been central to the argument that clitics are distinct from affixes. However, Romance clitics—and especially clitics found in European Portuguese (EP), Brazilian Portuguese (BP), and modern Italian—share numerous properties with affixes, a fact that has led Romance clitic scholars to question the label of clitic in favor of a more affix-like characterization. For example, arbitrary gaps (2b) in clitic sequences are readily found in Italian, which provides evidence for more affix-like behavior.

(3)  
*Carlo gli {mi/ti/ci/vi} ha presentato.  
Carslo introduced {me / you/ us /you pl.} to him/her.  
(Russi 2008:211)

In (3) above, we see that the third person dative form gli does not combine with first and second person accusative forms. In this case, an analytic construction involving a phrase-final preposition and tonic pronoun (e.g. a lui) is necessary to express this proposition. Similar gaps are found with clitic sequences involving dative and accusative first and second person forms (Russi 2008).

Another property of Romance clitics involves morphophonological idiosyncrasies. In essence, the morphological shape of the verbal host affects the realization of clitics in these languages. In Italian and French, preverbal third person accusative clitics show alternations depending on the verb-initial segments:
As shown above, when a preverbal third person singular accusative clitic precedes a verb beginning in a vocalic segment, the alternate ‘l’ is used. Similar alternations as shown in (4) can be found in Old Spanish but no longer occur in modern Spanish varieties (cf. Nishida 1996). Phonological alternations are also found with verb-final clitics in both Italian and Portuguese.

The examples above in Italian and Portuguese show stem allomorphy by way of morphophonological processes affecting the verb and/or clitic when the clitic attaches

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4 The cases in (5b) and (5d) have been characterized as “reciprocal allomorphy” (i.e. affecting both stem and clitic) by Luis (2009a).
postverbally. Moreover, Italian and EP also show clitic cluster-internal allomorphy that impacts the shape of the final cluster (cf. Luís 2009a):

\[(6)\]

\[a. \text{Glielo ha detto.} (\text{*Gliolo ha detto.}) \quad \text{(It.)}\]

‘He told them it.’

\[b. \text{Disse-mo.} (\text{*Disse-me-o.}) \quad \text{(EP)}\]

‘He told me it.’

\[c. \text{Disse-no-lo.} (\text{*Disse-nos-o.}) \quad \text{(EP)}\]

‘He told us it.’

One final way in which Romance clitics seem to function more like affixes than expected by the early clitics scholars (e.g., Zwicky & Pullum 1983, Zwicky 1985) is found in the distribution of clitics and affixes in the linearization of EP morphemes. Consider the following example:

\[(7)\]

\[\text{Eu vê-lo-ei.} \quad \text{(EP)}\]

‘I will see him.’

EP provides unique clitic placement patterns with respect to synthetic future and conditional verb forms. These forms allow for clitic attachment directly to the infinitival stem, with the inflectional morpheme that provides tense and aspect, as well as person and number, following the clitic. This indicates a divergence from the expected placement of clitics outside of inflectional affixes (cf. 2e)
The above examples in (3)-(7) suggest that Romance clitics pattern more like affixes rather than as syntactically free elements. The following section will review the ways in which Romance clitics appear to function as free morphemes within the syntax.

2.1.3 Syntactic properties
Preverbal clitics—also known as proclitics—in Ibero-Romance typically have different properties than postverbal clitics—or enclitics. One of these properties is the availability of interpolation, which involves the placement of a lexical item, such as negation or a subject pronoun, between the clitic and its verbal host (Barbosa 1996, Nishida 1996, Vigário 1999, Zwicky 1985). Interpolation is a property found in EP, Old Spanish, and medieval Romance (Barbosa 1996, Goodenkauf 2014), but not in other modern Romance varieties.\(^5\)

(8)  

\(<\text{ele o ainda não visitou.} (\text{EP})\>  
\text{‘...he has \textit{not} visited \textit{him} yet.’ (Luís & Otoguro 2004:341)}\)

The interpolated elements in (8) above in EP are suggestive of syntactic rather than morphological status of the clitic in EP, since affixes by definition do not allow \textit{full words} to separate them from their stems (cf. Luís 2009a).

Another property shared by proclitics in Romance languages—particularly in

\(^5\) Goodenkauf (2014) posits that interpolation in Old Spanish came about in the syntax through contact with Classical Arabic, which shows interpolation between \textit{subject} clitic placement and a verbal host. He further suggests that the rise and fall of the use of interpolation in Old Spanish and other archaic varieties of Southern Romance directly corresponds with the increase and decrease in Arabic language influence in the Iberian Peninsula. Whether or not this holds true for Spanish, modern clitic placement with interpolated units in EP is still available but is quite restricted such that only negation and simple adverbs can intervene between the clitic and its verbal host (Vigário 1999, Luís & Otoguro 2004).
Spanish and Portuguese—is wide scope over semantically related conjoined verbs (Luís & Sadler 2003, Luís & Spencer 2005, Luís 2009a). In (9a) below, the proclitic *lhes* has wide scope over both coordinated VPs, in contrast with (9b) which shows repetition of the object with the same reference.

(9)  

a. Acho que *lhes* leram uma história e *deram* um livro.  

b. Acho que *lhes* leram uma história e *lhes* deram um livro.

‘I think that they *read* them a story and *gave* them a book’

(Luís & Sadler 2003:140)

While both (9a) and (9b) are acceptable utterances with or without repetition of the clitic before the second verb, the optional repetition of the clitic is restricted to proclitics. That is, wide scope over coordinated phrases is limited to proclitics, and enclitic placement necessitates the repetition of the clitic. The examples in (10) illustrate that the accusative enclitic *me* ‘me’ cannot have scope over the coordinated verbs and results in an ungrammatical or infelicitous utterance.

(10)  

a. *A minha mãe ajudou-me e incentivou.*  

b. *A minha mãe ajudou-me e incentivou-me.*

‘My mother helped *me* and encouraged *me.*’

(Luis & Sadler 2003:140)
Finally, preverbal clitics do not display any of the allomorphy presented above in (5) with respect to both stem and reciprocal allomorphy. Additionally, the so-called proclisis triggers in EP allow for syntactic transparency of what Luís (2009a) argues is a phrase-level phenomenon rather than lexical affixation.

The data provided in this section primarily with respect to proclitics in EP highlight important differences between preverbal and postverbal clitics. Generally speaking, enclitics function more like affixes, while preverbal clitics are more similar to syntactic constituents. The summary provided in the section that follows addresses some of the ways in which this generalization does not hold true.

2.1.4 Summary
The preceding sections and examples have been presented as evidence of clitics as affixes (§2.1.2) or as syntactic constituents (§2.1.3). The facts that suggest Romance clitics behave like affixes are summarized in (11) below, and those that suggest that Romance (and especially EP) clitics should be treated as syntactic units can be found in (12).

(11) Affix-like properties of Romance clitics

   a. Arbitrary gaps in combinatory power (postverbal clitics in Italian)

   b. Allomorphy with the stem (EP, BP, Italian, French)

   c. Cluster internal allomorphy (EP, Italian, Spanish [e.g. se lo, but *le lo])

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6 This holds for Portuguese, but as shown in (4), French has consistent preverbal clitic allomorphy in the presence of vowel-initial verbs. Italian, on the other hand, shows more variability in preverbal allomorphy.

   a. Elle m’a dit que tu viens demain. (*Elle me a dit que tu viens demain.) (Fr.)
      ‘She told me that you’re coming tomorrow.’

   b. Lei ti ha detto che viene domani. (?Lei t’ha detto che viene domani.) (It.)
      ‘She told you that she’s coming tomorrow.’

Spanish clitics, meanwhile, show no cluster-external allomorphic phenomena.
d. Placement of clitic between host and inflectional affix (EP)

e. Inability to occur without the presence of a verbal host (EP, BP, Italian, French, Spanish)

f. Inability to be coordinated (EP, BP, Italian, French, Spanish)

(12) Word-like properties of Romance clitics

a. Interpolation (preverbal clitics in EP)

b. Scope over coordinated phrases (preverbal clitics: Spanish, Portuguese)

c. Lack of stem allomorphy (preverbal clitics in EP/BP, in contrast with Italian or French clitics)

However, the existence of certain phonological processes suggests that enclitics have certain features that crucially distinguish them from affixes. One such example is that, across Romance languages (Italian, Spanish, BP, and EP), enclitics are placed outside of the stress placement rules, unlike inflectional and derivational suffixes which do affect word-level stress patterns (Vigário 1999, Luís 2009b). With respect to clitics placed between the stem and inflectional affix in EP (cf. example (7)), Vigário (1999) argues that this placement is not good evidence that (en)clitics in EP are truly affixes. She instead provides evidence that a) the clitic is attaching not to the inflected verb but rather to the verbal host in its infinitival form, and b) the infinitive host and the inflectional morpheme(s) are actually two separate phonological words. As evidence for the former, Vigário (1999) offers the following paradigm:
In this paradigm, the author argues that speakers choose not an inflected form to which they attach the clitic, but rather an infinitive, with the inflectional information forming a separate phonological word. The case of (13a.iii) represents an exception that speakers have learned and maintained through frequency of use (Vigário 1999).

In order to support the latter claim, Vigário (1999) offers evidence that forms like (13a.iii) and (13b.i) have two primary stresses: on the verbal stem (*far and *refazer*), as well as on the inflectional endings (*-ia*). The existence of the two primary stresses suggest that future and conditional forms consist of two phonological words, rather than a single (phonological) word with a clitic inserted between stem and affix. These two lines of evidence are used to argue against the affixal status of enclisis in Portuguese.

Meanwhile, it must be noted that many authors consider the phrase-level syntactic constituent analysis problematic for a number of reasons, despite the similarities between (pro)clitics and other syntactic words in Romance languages. First, it is difficult to account for the allomorphy found with pro- and especially enclitics from the perspective that object pronouns of this sort are syntactic units. In essence, why do phonological alterations occur between these specific kinds of words but not between other words? If we attempt to remedy this concern by arguing that proclitics and enclitics do not fit into...
the same theoretical category—that is, with proclitics functioning as syntactic words and enclitics as affixes—the justification of such a position proves problematic. If, for example, the 3rd masculine accusative o ‘it, him’ in EP refers to the same referent but acts as an affix under certain (unmarked) syntactic conditions and as a word under other (marked) conditions, this argues for two separate entries in speakers’ mental lexicon: o as word-form 3rd accusative masculine object with no stem allomorphy, and o as affixal 3rd accusative masculine object that is subject to various allomorphic processes with its stem. From a theoretical perspective, such a distinction is disadvantageous in terms of storage and processing. A functional approach provides a more favorable solution, such that the categorization of these units can have fuzzy boundaries, and contextual differences can rely on placement alone. Furthermore, the triggers themselves clearly function as gradient devices, some always producing proclisis, while others show more variation in the resulting placement of the object pronoun. Again, a functional approach offers certain advantages over a formal one, since it allows for fuzzy categories and gradient phenomena.

Furthermore, clitics are inherently dependent on their host. This is true in all of the Romance languages, in which clitic object pronouns must necessarily be adjacent—or nearly adjacent in certain special cases (cf. §2.1.3 and example (8))—to their verbal hosts. Not only are they prosodically weak units that must co-occur with a prosodically strong host unit, but the adjacent unit must be of a certain kind (i.e. a transitive or ditransitive verb, except in the case of verbs that have lexicalized inherent clitics or passivized verbal expressions). With this restriction in mind, the classification of a clitic as a syntactic word that can be manipulated around other unique syntactic words becomes
difficult to maintain. As Vigário (1999:228) so aptly explains, “To sum up, although the fact that pronominal clitics attach to a specified class of words is a property clitics share superficially with lexical affixes, they still show differences with respect to affixes that seem to call for a syntactic or a morphological analysis distinct from inflection.”


7 The debate over the theoretical status of clitics is an interesting one, but ultimately it is not central to the questions that are addressed in Chapters 4-7. I am less concerned about what is included in the “umbrella term” and grammatical category that ‘clitics’ are classified into (Nevis et al. 1994); instead, I am more interested in how issues of reference, usage, and frequency affect patterns in the living language, patterns which are often condemned to the unexplained realm of “Performance”. The question of categorizing clitics as belonging to a morphological category (“affixes”) or a syntactic one (“words”) is inherently problematic because it treats the issue as categorical. The expectation under this approach is that a phenomenon that is messier than can be described by a binary categorization can still be made to fit within such a framework. While categorizing units facilitates cross-linguistic comparison, it also often attempts to create universals and categories out of gradient phenomena from the emergent grammar (cf. Bybee 2011).

8 As Russi (2008:5) suggests, “Despite such intensely prolific investigation, however, a cohesive, satisfactory definition of clitics has not been achieved yet, and whether clitics represent an independent morphosyntactic category, or should rather be incorporated in the category of affix or in the category of words remains an open question.”
The sections to follow include discussion of the last of these—clitic climbing—and its relation to the study of variable clitic object placement.

2.2 Clitic climbing

Clitic climbing is the phenomenon whereby

the clitic is associated with a verb complex in a subordinate clause but is actually pronounced in construction with a higher predicate (for instance, the matrix verb which selects that subordinate clause), even though it may have no obvious semantic or syntactic connection to the verb.

(Spencer & Luis 2012:162)

In Romance languages, clitic climbing occurs when two predicates (or two verbs) join to form a single complex predicate. It has been posited that only languages that allow for null subjects, such as Spanish, Italian, and EP, license clitic climbing (cf. Ordóñez 2012). Spencer & Luis (2012) note that clitic climbing in Romance languages is common with auxiliary constructions, such that the auxiliary verb and its complement seem to function as a single syntactic unit rather than as two clauses. Clitic movement between verbs also extends to modals, motion verbs, phrasal or aspectual verbs, and causatives, but it is not required in these restructuring contexts (Spencer & Luis 2012, Galves, Moraes & Ribeiro 2005). Nishida (1996) crucially explains that interpolation contexts as seen in (8) above are not cases of clitic climbing, since clitic climbing necessarily involves the presence of only verbal elements between the clitic and the verb with which it associates.
In the sections to follow, I briefly compare and contrast the contexts available for clitic climbing in Italian and Spanish (§2.2.1), European Portuguese (§2.2.2), and French and Brazilian Portuguese (§2.2.3).

2.2.1 Clitic climbing in Italian & Spanish
Spencer & Luis (2012) suggest that languages differ with respect to the optionality of clitic climbing, with some languages requiring it and others showing what some might characterize as “free variation”. In this section, I consider clitic placement and clitic climbing patterns in Italian and Spanish and discuss the optionality of the process of clitic climbing. These languages are considered together due to similarities in their patterning. Both languages have preverbal object clitic placement (proclisis) when the clitic associates with a single finite verb, though in Spanish this pattern is much newer, starting in the 20th century in contrast with the 16th century in Italian (Fernández Soriáno 1999, Russi 2008, RAE 2009). Postverbal clitic placement in these languages is found only with nonfinite hosts, including infinitives, gerunds, and participles. These facts have led Romance scholars to argue that the shape of the verb is the determining factor for clitic placement (Russi 2008, Bosque & Demonte 1999, Madeira 1993, Luís & Otoguro 2004, inter alia). However, clitic climbing is not only possible but quite common in these languages, despite this common generalization in the literature about finiteness (or the morphosyntactic shape of host) as the factor that definitively determines clitic placement.

Clitic climbing in Italian and Spanish can occur in complex predicates with modal

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9 For information about clitic vs. tonic object pronoun placement with gli and loro in Italian, cf. Russi (2008), especially Chapter 3.
10 Present participles in both Spanish and Italian take postverbal clitics, while past participles in Italian additionally allow for postverbal clitics under certain conditions (cf. Russi 2008). Both languages also accept postverbal clitics for affirmative imperative verb forms.
and aspectual auxiliaries, when the subject of the first predicate is co-referent with the (unexpressed) subject of the second (Fernández Soriano 1999). Thus, the following patterns can be found:

(14)  a. *Lo compro. (It., Sp.)

‘I’m going to buy it.’

b. L’ho comprato. // *Lo he comprado. (It. / Sp.)

‘I bought it.’ ‘I have bought it.’

c. Voglio comprarlo. // *Quiero comprarlo. (It. / Sp.)

d. *Lo voglio comprare. // *Lo quiero comprar. (It. / Sp.)

‘I want to buy it.’

In the examples in (14), we can see the typical proclisis found with finite verbs (14a, b). The enclitic alternate in these cases is disallowed in both languages: compare (14a) with *Comprolo and (14b) with *Ho compratolo, *He compradolo. Enclisis is often found with infinitive forms, as shown in (14c). The examples in (14d), meanwhile, are representative of tendencies toward clitic climbing in Italian and Spanish, since the only requirements for clitic climbing are a) a finite verb that allows for it (auxiliaries or modals), often involving verbs that “are associated with grammaticalization processes, and which often become morphologized” (Spencer & Luis 2012:164)\(^{11}\) and b) the same

\(^{11}\) Spencer & Luis (2012) further note that the semantics of the so-called “restructuring verb” are not a driving factor for clitic climbing, since we can find cases of near-synonyms, such as Italian volere ‘want’ and desiderare ‘desire’, that show divergent trends with respect to ability to allow for clitic climbing (cf. 14c-d).
subject reference between the two verbs.  

In Spanish, clitic climbing has been found to be more common with certain kinds of verbs (i.e. those that express cross-linguistically grammaticalized meanings) (cf. Myhill 1998, Schwenter & Torres Cacoullos 2010, Schwenter & Torres Cacoullos 2014a), with higher frequency verbs (Davies 1995, Schwenter & Torres Cacoullos 2014a, Schwenter & Torres Cacoullos 2014b), with clitics that are more animate than the subject of the phrase (Myhill 1988), with animate clitics in general (Davies 1995), with inanimate clitic referents (Schwenter & Torres Cacoullos 2010, Schwenter & Torres Cacoullos 2014a), with clitic clusters (Davies 1995), and with more topical or persistent referents (Schwenter & Torres Cacoullos 2010, Schwenter & Torres Cacoullos 2014a). These findings are highly suggestive of the contextual conditioning of clitic climbing: indeed, it appears to be constrained by certain verbal features and factors related to

\[12\] It is interesting to note that in the case of an additional predicate (see below with dovere), clitic climbing shows a mismatch between essere and avere past forms in Italian. The following examples show that the selection of essere by a speaker requires clitic climbing in complex predicates of the form in (e), while avere disallows clitic climbing in similarly complex predicates (c).

\[
\begin{align*}
a. & \text{ Devo andarci.} \\
b. & \text{ Ci devo a\text{ndo}r\text{a}r.} \\
& 'I should go there.' \\
c. & \text{ Avevo dovuto andarci.} \\
& 'I had had to go there.' \\
d. & *Ci avevo dovuto andare. \\
e. & C'ero dovuto andare. \\
f. & *Ero dovuto andarci. \\
& 'I had had to go there.' (Spencer & Luís 2012:165)
\end{align*}
\]

Spencer & Luís (2012) suggest that this difference is due to the treatment of these phrases as containing either one or two predicates, forcing the placement. Restrictions of this sort are not in place in Portuguese, which does not have participles that select to be forms over to have forms to create perfect constructions:

\[
\begin{align*}
g. & \text{ O governador n\text{\'o} os devia ter n\text{\'e}meado.} \\
h. & \text{ O governador n\text{\'o} devia t\text{\'e}-los nomeado.} \\
& 'The governor should not have nominated them.' (Perini 2002:390)
\end{align*}
\]

Perini (2002) explains that (h) tends to be preferred over (g) in modern BP, but both are acceptable.

\[13\] The status of the concept of “clitic climbing” is somewhat debated. Wanner (1996), for example, suggests that clitics remain in a fixed position and the verbs are raised to higher positions to result in enclisis. This differs from the assumption that clitics are generated postverbally and adjacent to the verb with which they associate. Inconsistencies in the underlying assumptions of clitic placement are not uncommon in the syntactic literature (cf. Madeira 1993).
referential status. Based on the data and observations provided by these authors, it is likely that some of these constraints and others are also at work in other Romance varieties to create favorable or unfavorable conditions for clitic climbing.

2.2.2 Clitic climbing in European Portuguese

EP (Madeira 1993, Martins 1993, Luís & Otoguro 2004, Luís & Otoguro 2011, Luís 2009a, Luís 2009b, *inter alia*), Asturian (Fernández Rubiera 2009, Fernández Rubiera 2013), and Galician (RAE 2009) all follow patterns of clitic placement dependent on the presence of certain phonological or syntactic elements prior to the verb phrase to which the clitic attaches. The general placement in these varieties is enclisis to the lexical verb (15a-b). Clitic climbing can be found in EP in the typical restructuring environments described in the prior section, such that two predicates become one and the clitic “climbs” to an enclitic placement on the auxiliary or modal verb (cf. Andrade 2010c), as in (15c).

(15) a. Maria *liga-*me cada noite. (EP)
   ‘Maria *calls me* every night.’

b. Maria está *a ligar-*me neste momento. (EP)
   ‘Maria *is calling me* right now.’

c. Maria *está-*me *a ligar* neste momento. (EP)
   ‘Maria *is calling me* right now.’

While (15c) does not quite fit the traditional definition of clitic climbing, it has been characterized as such by recent authors exploring questions of clitic placement.
(especially Andrade 2010a, Andrade 2010b, Andrade 2010c).\textsuperscript{14} EP grammar also allows for clitic climbing in the presence of certain preverbal units, as mentioned above.\textsuperscript{15} Examples are provided in (16) below.

\begin{enumerate}
\item A Maria diz \textit{que me liga} depois.  \hfill (EP)  
\begin{quote}
‘Maria says \textit{that} she \textit{will call} me later.’
\end{quote}
\item A Maria diz \textit{que me está a ligar} neste momento. \hfill (EP)  
\begin{quote}
‘Maria says \textit{that} she \textit{is calling} me right now.’
\end{quote}
\end{enumerate}

According to the definition of clitic climbing provided by Spencer & Luís (2012) at the beginning of §2.2, (16a) would \textit{not} be a case of clitic climbing, while (16b) would fit within the given definition due to the presence of the auxiliary verb. However, in both cases, the clitic placement is conditioned in large part by the so-called proclisis trigger \textit{que} ‘that’. Also note that the clitic climbing found in (15c) differs from that in (16b) with respect to the placement as enclisis or proclisis.

To summarize, while clitic climbing of the sort found in (16b) occurs in EP, mirroring patterns shown in Italian and Spanish, the contexts in which it can occur are much more limited. The less traditional case of clitic climbing (15c) is readily available in contexts lacking the so-called proclisis triggers. Finally, the case of preverbal clitic placement in (16a) is not considered clitic climbing because it does not show the restructuring of two predicates into a single complex predicate; instead, it diverges from

\textsuperscript{14} It should be noted that the enclitic attachment to the auxiliary form \textit{está} is not only an orthographic convention, but rather a case of true enclisis that reflects the patterns that enclitics show throughout EP, including stem allomorphy with forms of \textit{estar}, etc.

\textsuperscript{15} These triggers are described in detail in §2.3.1.
the typical enclitic patterns found throughout the EP system but follows the normative
grammar triggered by preverbal proclisis triggers such as que.

2.2.3 Clitic climbing in French & Brazilian Portuguese
Clitic placement in French is quite regular: the clitic is placed before the lexical verb
(Galves, Moraes & Ribeiro 2005, Spencer & Luís 2012). The typical placement patterns
are outlined in the examples below.

(17) a. Je le lis chaque jour. (Fr.)
   ‘I read it everyday.’

   b. Je l’ai lu. (Fr.)
   ‘I read it.’

   c. Je vais le lire. (Fr.)
   ‘I’m going to read it.’

   d. Je peux le lire. (Fr.)
   ‘I can read it.’

The examples above show the clitic object placed before the finite verb (17a-b) and
before the infinitive forms in (17c-d). The placement rules thus require clitics to the
placed prior to the verb with which they associate. The apparent exception of (17b)
suggests that the compound passé composé forms have become grammaticalized as
single units expressing tense and aspect and form a true compound consisting of the
semantic content of the lexical verb (or participle). These clitic placement patterns are
invariable in French. French thus does not display clitic climbing like that found in
Italian, Spanish, or EP.

Brazilian Portuguese displays similarities with French clitic placement patterns:
clitics are placed before the verb with which the clitic associates (cf. Perini 2002, Galves,
Moraes & Ribeiro 2005, Simões 2006). However, BP allows for much greater freedom of
placement, as seen below in (18)\textsuperscript{17}.

\begin{enumerate}
\item[18] a. Eu o leio. (Eu leio-o or Eu leio O)\textsuperscript{18} (BP)
\hfill ‘I read it.’
\item b. Eu estou o lendo. (Eu o estou lendo) (BP)
\hfill ‘I’m reading it.’
\item c. Eu vou lê-lo. (Eu vou o ler or ?Eu o vou ler) (BP)
\hfill ‘I’m going to read it.’
\item d. Não o posso ler. (Não posso lê-lo or ?Não posso o ler) (BP)
\hfill ‘I can’t read it.’
\end{enumerate}

\textsuperscript{16} Spencer & Luis (2012:257, Table 8.1) offer a general description of clitics in French with the following basic linearization:
\begin{enumerate}
\item a. S(CL)=[Obj(CL)]=V
\end{enumerate}
In this ordering, the mandatory subject clitic is placed preverbally before the (optional) object clitic,
followed by the (finite) verb. Internal clitic cluster ordering is also provided, showing that unlike other
Romance languages, French does not have a default DAT-ACC ordering; instead, certain forms must
cede or follow others (i.e. 1st and 2nd person forms precede 3rd accusative forms, all of which must precede 3rd
dative forms, followed by locative and partitive clitics when present).

\textsuperscript{17} Examples deemed to be marginal are marked by the addition of ‘?’ prior to the sentence.
\textsuperscript{18} The use of the null object would be the preferred option here and throughout these other examples except
in the most formal registers in BP. Another potential option, especially if the referent were animate,
specific, and human would be the use of a tonic pronoun ele, as in, eu vejo ele ‘I see him’. Also note that
imperative verb forms normatively require postverbal placement (Leva-me X! ‘bring me X’), but preverbal
placement is quite common in BP (Me leva X! ‘bring me X!’)
The examples above show quite a lot of variation in placement, which is likely due to a number of social factors and internal linguistic factors. For example, Simões (2006) suggests that the enclitic options *Eu vou lê-lo* and *Não posso lê-lo* for (18c-d) are preferred by Brazilian speakers because of a general phonological preference to place clitics that begin with vowels (i.e. the accusative *o, os, a, as*) as enclitics\(^{19}\). Simões’ (2006) assertion about the preference of placement is contested by Galves, Moraes & Ribeiro (2005), who suggest that this enclitic placement is caused by the imposition of EP placement rules for third person clitics because of their late acquisition through formal education for BP speakers. Interestingly, the supposed BP preference for the form *Não posso lê-lo* in (18d) does not follow from Galves, Moraes & Ribeiro’s (2005) explanation, since late acquisition of EP placement rules would also involve the acquisition of the proclisis trigger since the *não*, presumably resulting in *Não o posso ler*. This would be the ideal environment in which to check if BP patterns more like Spanish, especially given Ordóñez’s (2012) claim in favor of the existence of a blocking effect for clitic climbing in the presence of negation. Furthermore, first and second person clitic object placement is not discussed in the BP literature beyond the generalization that these clitics are placed immediately before the main verb (cf. Simões 2006) and warrants further investigation.

Under the traditional definition of clitic climbing provided at the beginning of §2.2, the preverbal placement in (18d) *Não o posso ler* and (18b) *Não o estou lendo* would be considered cases of clitic climbing. However, the common placement of the

\(^{19}\) Note that this is not the preference for a simple predicate, as seen in (18a): in this case, the clitic placed at the left edge of the verb in proclitic position is preferred if the clitic is indeed overtly expressed rather than expressed as a null or tonic form (cf. Perini 2002).
clitic between the two predicates may also be considered a case of clitic climbing if we are to assume that the clitic is generated in postverbal position, with empty syntactic categories allowing for the movement to a “higher” placement. This sort of analysis brings about a number of important questions about the assumptions implicit in the idea of clitic climbing. If we are to accept this term to mean the movement of a clitic from its place in the underlying grammatical structure, we assume a single default locus of clitic generation. If we posit that clitics are generated in postverbal position following the semantic host, then we are forced to make the argument that the clitic sometimes climbs to a higher position (consider especially the differences between the two options available in (18c) and the two in (18d)). On the other hand, if we assume that since preverbal placement is the unmarked option (as in French)—and I would argue that it is, at the least, less marked than postverbal placement in BP—and thus clitics are generated prior to the verb with which they semantically associate, we then have to account for clitics ‘climbing’ higher (e.g., Não o posso ler), as well as either ‘lowering’ of the clitics or ‘climbing’ on the part of the verbal hosts from the site of generation (e.g., Não posso lê-lo). While one of these analyses may eventually result in descriptive adequacy, all of them remain problematic for the question of explanatory adequacy. Furthermore, the motivation for the variation is left unexplained by syntactic theory.

2.2.4 Summary
To summarize, clitic climbing is found with the following distribution in the Romance languages:
(19) a. No clitic climbing occurs (V CL=V)

   i. French

b. Traditional clitic climbing is available in all ‘restructuring’ contexts (V V=CL > CL=V V)

   i. Italian

   ii. Spanish

c. Traditional clitic climbing is available in restricted syntactic contexts with restructuring verbs (V V=CL > CL=V V)

   i. European Portuguese


d. Non-traditional clitic climbing is available (V V=CL > V=CL V); changes to clitic placement in contexts outside of ‘restructuring’ predicates is available (V=CL > CL=V)

   i. European Portuguese

e. Multiple potential patterns of clitic climbing are available, challenging the concept of clitic climbing; empirical evidence is lacking for whether placement is context-dependent

   i. Brazilian Portuguese

With respect to the claim that only null subject languages allow clitic climbing to occur (Ordóñez 2012), Brazilian Portuguese, and indeed some varieties of Spanish, pose a potential problem for such a claim. In short, BP and certain (especially Caribbean)
varieties of Spanish have high rates of subject expression (cf. Lira 1982, Sainz-Maza Lecanda 2013), which may be indicative of a move away from the null subject status of these varieties toward a requirement of expressed subjects. Davies (1995) shows that languages with low rates of subject expression (namely Peninsular Spanish) and those with high rates of subject expression (e.g. Puerto Rican Spanish) are both among the varieties that have the highest rates of ‘clitic climbing’. Furthermore, the data presented above suggest that ‘clitic climbing’ may occur in various configurations in BP. This does not provide definitive evidence against clitic climbing as available in only null subject languages, since BP and Caribbean Spanish varieties do still allow for variable subject expression. It does, however, suggest that varieties that may eventually result in obligatory subject expression could still maintain patterns that reflect what has traditionally been called ‘clitic climbing’ and has been thought to be restricted to null subject varieties.

2.2.5 Clitic climbing and the theoretical status of clitics

Clitic climbing as a concept is difficult to defend given the variation found particularly in Portuguese varieties. In fact, the variation in the application of ‘clitic climbing’ in even the least complicated cases of Spanish and Italian (cf. 19a) seems to suggest that clitic positioning or placement may be a better way to conceptualize what occurs in Romance languages. In essence, clitic climbing is argued to occur when two predicates are restructured as a single unit. Such restructuring is a gradient process rather than a categorical one, and even a single speaker will likely show variation in clitic placement patterns in potential restructuring contexts. More auxiliary-like verbs typically show higher rates of clitic climbing and are indicative of “advanced unithood”, a fact that
suggests that clitic climbing is an indicator of grammaticalization (Torres Cacoullos 2013). Bybee (2011:70) discusses the gradient or gradual changes that occur as a result of grammaticalization, positing that “seemingly discrete grammatical features can change gradually” as different constructions become more grammaticalized. Given the generally accepted assumption that clitics are based-generated as enclitics to their semantic hosts, this is likely the process underway for Spanish and Italian clitic climbing. However, clitic climbing and variation in clitic placement are not necessarily reflexes of grammaticalization in other languages.

As detailed in the above sections, the question of whether clitics function like affixes or words—or something else entirely—is still very much debated. The fact that clitic climbing can occur in some of the Romance languages suggests that clitics may be more word-like, since the concept of clitic climbing by nature requires clitics to move within a given syntactic structure. In simple terms, the presumed movement from enclisis to proclisis found in Spanish and Italian seems to suggest a change that is syntactic. The change in EP from prototypical enclisis (V V=CL) to enclisis with respect to an auxiliary verb (V=CL V) offers similar syntactic evidence. In essence, affixes do not move easily from one position to another, and elements that are suffixes do not move to become prefixes. We must then ask: Are enclitics affixes and proclitics words? Thus, can affixes become words under certain conditions? Galves & Sandalo (2012) do not believe that to be possible and instead argue that the affixal properties of EP clitics are related to greater grammaticalization whereby EP pronominal objects fall at the end of Hopper & Traugott’s (2003) grammaticalization cycle:
It is possible, then, to argue that enclitics are further along in the grammaticalization cycle than proclitics in the Romance languages, using Galves & Sandalo’s (2012) analysis: the EP clitic system has become simplified since enclisis (the norm) requires fewer word boundaries between a verb-clitic sequence. However, if we prefer to classify all object pronouns of the ‘clitic’ variety into a single category, that analysis still falls short. A preferred approach would be to classify all clitics as affixes (cf. Luís & Otoguro 2004, Luís 2009a, Luís & Otoguro 2011). Under this analysis, enclitics are seen as morphological word-level suffixes, which typically show more allomorphy, and proclitics are phrasal prefixes, which typically display less allomorphy. Pronominal objects in this view can receive a unified affixal treatment, even though the variation in linearization of clitics within a phrase is still left unaccounted for. These analyses are still unable to address some of the phonological issues raised by Vigário (1999), who instead favors cliticization as a post-lexical process between morphology and syntax. Although not considered by these formal approaches, a more unified analysis would classify clitics as a fuzzy category, subject to different phonological processes when pre- or postverbal, with placement governed by constructional, social, and pragmatic factors. By classifying Romance object clitics in this way, accounting for the differences between proclitics and enclitics within and across Romance varieties becomes less important.

The phenomenon known as ‘clitic climbing’ has implications for the question of how to categorize clitics within either the syntax or the morphology, or as a separate fuzzy category, of the languages in question. If we accept clitic climbing as a
phenomenon that may or may not have multiple surface realizations in different languages, we make the assumption that clitics are generated in a certain location and can move in ways that suggest they are independent syntactic words. And, we must maintain that their movement is highly restricted. If we begin to question the assumptions implicit in the concept of ‘climbing’, however, the phenomenon becomes more controversial: Where are the clitics ‘climbing’ from and where are they ‘climbing’ to? Under what circumstances does the ‘climbing’ occur in actual usage? Why doesn’t it always occur in contexts where it can? For these reasons, I prefer to use the terminology of clitic ‘placement’ or ‘position’, choosing the fuzzy category approach and avoiding assumptions that can lead to questioning the viability of the analysis.

Clitic climbing in European Portuguese is somewhat different from clitic climbing in languages like Spanish and Italian. In essence, clitics in European Portuguese are thought to ‘climb’ following a proclisis trigger word, whereas clitics in Spanish and Italian do not require such specific syntactic conditions to display ‘climbing’ behavior. The proclisis and enlisis labels in Spanish and Italian thus correspond to the clitics that have ‘climbed’ and to those that have not, respectively. In EP, clitic climbing can result in either proclisis (CL=V V) given the necessary syntactic conditions, or enclisis (V=CL V) in unmarked contexts. And in Brazilian Portuguese, the situation is even more complicated, given the many possible positions in which clitics may surface.

2.3 Clitic objects in Portuguese and Spanish

The pronominal object systems in Spanish and Portuguese differ in important ways in

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20 The use of the concept of markedness reflects the fact that the most frequent verbs are the ones that show the highest rate of the enclitic ‘clitic climbing’ context (e.g., estar a INF ‘to be Xing’) (cf. Andrade 2010c).
modern language use. Although historically clitic objects in these languages are ‘second position’ clitics, modern usage no longer requires such strict positioning except with respect to the verbal host. Furthermore, Spanish and, to a lesser extent, European Portuguese show strong preferences for clitic object pronouns, in contrast with Brazilian Portuguese, which appears to be moving toward greater use of tonic pronouns (cf. Cyrino 1993, Kato 1993, Perini 2002, Schwenter 2013a, Schwenter 2014). Along with this crucial difference between these Portuguese varieties, the placement patterns of pronominal objects display divergent trends, with variation found in each variety. In the sections that follow, I will describe the object pronoun systems in European Portuguese (EP) and Brazilian Portuguese (BP), as well as the related and well-studied Western Romance language of Spanish, focusing particularly on questions relating to object placement patterns. I conclude with the relevant similarities and differences between the systems to my own work and the importance of considering all three varieties together.

2.3.1 Clitic objects in EP
Although EP is similar to BP in its use of null objects for certain 3rd person inanimate referents (cf. Schwenter 2013a, Schwenter 2014), usage patterns in its pronominal object system are otherwise quite unlike those of BP. For example, modern EP uses clitic objects to the exclusion of tonic pronouns (Cunha & Cintra 2002). Additionally, the clitic placement patterns in EP diverge from those of BP. First and foremost, the unmarked placement of object clitics is postverbal in EP (cf. Mateus et al. 2003), as in (21) below.
(21) a. Maria disse-me isso. (EP)

‘Maria told me that.’

b. Maria vai dizer-me isso. (EP)

c. Maria vai-me dizer isso.21 (EP)

‘Maria is going to tell me that.’

In addition to the difference between general enclitic placement in EP and proclitic placement in BP, EP also displays normative preverbal clitic placement under certain syntactic conditions. Cunha & Cintra (2002) define the conditions in which proclisis is preferred. These include: the presence of preverbal negation, an interrogative pronoun or adverb, exclamatives (e.g. que ...!), subordinate clauses22, certain adverbs or adverbial expressions, preverbal subjects that include a certain kind of indefinite pronoun (of the quantifier class, cf. Mateus et al. 2003:855), and disjunctive phrases such as ou ... ou ‘either ...or’. In the case that a pause or adverb is placed between a) the trigger and the verb, or b) between two verbs in a potential restructuring context (auxiliary/modal+infinitive), the clitic remains postposed to the main verb (Cunha & Cintra 2002, Mateus et al. 2003). Although these grammarians suggest a ‘preference’ for proclisis instead of a ‘prescription’ for proclisis in the contexts listed above, they do not offer any guidance for when one might expect to find enclisis in the presence of these

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21 Cunha & Cintra (2002) offer contradictory rules regarding this kind of ‘clitic climbing’: first, they suggest that enclisis to the main verb always occurs in complex predicates in unmarked conditions (as in 21b), but they later suggest that enclisis to the auxiliary is acceptable. They offer no explanation for when one of these two enclisis choices is selected over the other.

22 Cunha & Cintra (2002) specify that subordinate clauses show a preference for proclisis even in the absence of an overt complementizer.
elements. Meanwhile, suggest that variation in placement found in (22) is suggestive of ellipsis:

(22) a. O que *te* dizer?  
    b. O que *dizer-te*?  

   ‘What to say to you?’

The argued distinction between (22a) and (22b) is that the latter contains an elliptical structure in which an auxiliary or modal is left unrealized in the surface form (i.e. along the lines of o que (vou/posso) dizer-te?). This would suggest that speakers are more accepting of non-normative enclisis in the presence of a complex predicate, which is supported by the data presented in Chapter 4. While this may explain why variation can occur in the examples in (8), it does not explain why or when speakers prefer enclisis with a complex predicate under proclisis-inducing conditions.

2.3.2 Clitic objects in BP

Object pronouns in Brazilian Portuguese can be divided into two groups: clitic object pronouns and tonic object pronouns. These groups are broken down in (23) below.

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23 To be fair, these grammarians present contexts that show “preferences for proclisis”, which are described by many linguists as “obligatory” proclisis environments (e.g., Madeira 1993, Barrie 2000, Mateus et al. 2003, Luís & Otoguro 2004, Luís 2009a, Andrade 2010b, Galves & Sandalo 2012, Fiéis, Madeira & Xavier 2013, inter alia). Notably, Cunha & Cintra’s characterization aligns better with my observations and data in Chapter 4 than that of the linguists: these contexts display a preference rather than a requirement for proclisis.

24 In fact, data presented in the upcoming sections suggest that ir+infinitive constructions take enclisis in only about 55% of the cases under proclisis-inducing conditions. This variation is explained through syntactic constructs in the mind of the speaker by Mateus et al. (2003), with no contextual grammatical or social predictors, and thus such variation is considered totally unpredictable. Chapter 4 shows that the variation is indeed structured and predictable.
(23) a. Clitic object pronouns in BP

   i. me, te, nos, [o(s), lhe(s)] (1st and 2nd person accusative & dative)
   ii. o, a, os, as (3rd person accusative, in formal registers only)
   iii. lhe, lhes (3rd person dative, in formal registers and certain dialects)\(^{25}\)

b. Tonic object pronouns in BP

   i. a gente (1st person plural, in competition with clitic nos)
   ii. você, vocês (2nd person, in competition with clitics: o, os, a, as and lhe, lhes)\(^{26}\)
   iii. ele, ela, eles, elas (3rd person, in competition with clitics: o, os, a, as and lhe, lhes)

Tonic pronouns are placed following the verb in a fixed phrasal position (cf. Thomas 1969), and, unlike clitic objects, these forms do not lean on a verbal host. In short, the tonic forms are truly syntactic words. The use of either tonic object pronouns or their clitic counterparts results in a series of synonymous constructions: they differ in form but share similar functions grammatically, if not socially (Perini 2002, Perini 2010).\(^{27}\) With respect to the third person forms, it must be noted that BP has a very high rate of unexpressed 3rd person objects—particularly with inanimate, non-specific referents—and

\(^{25}\) In formal registers, the lhe(s) forms are typically dative; in certain dialects where these forms are found in informal spoken registers, they take on accusative value in a phenomenon known as lheísmo (cf. Almeida 2011).

\(^{26}\) The second person formal tonic forms o(s) senhor(es), a(s) senhora(s) also exist, though it is common to use clitics instead in contexts requiring a higher register of speech.

\(^{27}\) Cunha & Cintra (2002:290) offer the following characterization and prescription of tonic pronoun avoidance in Portuguese: “Na fala vulgar e familiar do Brasil, é muito frequente o uso do pronome ele(s), ela(s) como objecto directo em frases do tipo: Vi ele. Encontrei ela. Embora esta construção tenha raízes antigas no idioma, pois se documenta em escritores portugueses dos séculos XIII e XIV, deve ser hoje evitada.”
3rd person clitic forms are very rarely used in spoken registers (cf. Thomas 1969, Kato 1993, Schwenter 2013a, Schwenter 2014). In fact, some scholars have concluded that the rise of null object usage in the 19th and 20th centuries corresponds with the introduction of the possibility of tonic object pronoun usage and the subsequent loss of variability of placement of clitics (Cyrino 1990, Cyrino 1993).

Object clitic placement in BP has been described by Perini (2010:119), who explains the general pattern in the following way: “o pronome oblíquo (sem preposição) se posiciona sempre antes do verbo principal da oração” (‘the oblique pronoun (without a preposition) is always placed before the main verb of the sentence’). However, BP clitics display some variation in placement, with enclitics also available particularly in more formal registers.28

(24) a. Maria me falou isso. (BP)

b. Maria disse-me isso. (formal BP)

‘Maria told me that.’

Perini (2002) posits that the placement in (24a) is preferred, while enclitic placement as in (24b) is becoming obsolete in modern BP.29 When auxiliaries or modals are used, the general rule of proclisis to the main verb still applies (Thomas 1974, Perini 2002, Perini

28 Perini (2002) and Thomas (1969) both mention a restriction against clitics in sentence-initial position in BP, which is a conservative restriction from the 19th century. This is likely related to the Tobler-Mussafia Law, and the restriction has largely been lost in spoken BP.

29 In fact, Galves, Moraes & Ribeiro (2005) say that 3rd person clitics are only acquired through schooling in Brazil, which leads educated speakers to follow EP placement patterns with these forms. To my knowledge, there has not been a systematic empirical study of this phenomenon.
Accordingly, the clitic object is most commonly placed before the main verb:\footnote{Other placements are allowed in these complex constructions, either preceding or following the infinitival form (cf. Thomas 1969:108, Thomas 1974:118-119).}

\begin{equation}
\begin{array}{ll}
\text{(25)} & \text{a. Ela vai nos ligar.} \\
& \text{‘She is going to call us.’} \\
& \text{b. Ela tinha nos ligado antes de o concerto começar.} \\
& \text{‘She had called us before the concert started.’}
\end{array}
\end{equation}

Another placement, namely the one seen in (21c) in \textit{vai-me dizer} is attested in written BP through the first half of the 20th century but is no longer available in this variety (cf. Cyrino 1993).

Perini (2002:389) outlines restrictions on enclitic (postverbal) placement regardless of the particular properties of the verbal construction. First, clitics may not be placed postverbally when a clause begins with a relative pronoun or interrogative (WH) word. He also offers a list of diverse words—including negation, quantifiers, and adverbs—that he claims necessarily require proclisis to the auxiliary (creating, for example, 25a in the following configuration: \textit{ela nos vai ligar}) or main verb (as in 24a) in BP: \textit{não}, \textit{nunca}, \textit{só}, \textit{mesmo}, \textit{também}, \textit{tudo}, \textit{nada}, \textit{alguém}, \textit{ninguém}, and \textit{que}. In contexts not containing any of these words, he writes, “the clitic may be placed after or before the verb, indifferently” \textit{(ibid.)}. A more comprehensive list of proclisis triggers in BP is provided by Thomas (1969), who suggests that negation, interrogatives, relative pronouns, the conjunction \textit{que}, certain adverbial conjunctions and adverbs, and some
prepositional phrases all trigger preverbal placement. Interestingly, preverbal triggers have also been described as having no effect on clitic placement in BP (cf. Galves, Moraes & Ribeiro 2005:149). However, placement patterns in modern BP usage in contexts marked by these ‘trigger words’ have not been well studied (Perini 2002). In fact, Thomas (1969) writes anecdotally that

the position of the pronoun may be affected by the choice of the pronoun itself, by several types of words which may precede the verb, by the tense form of the verb which is used, or by the fact that a second verb form follows the first. Sometimes these influences work against one another, usually producing more or less free variation.

Thomas (1969:102)

While Thomas (1969) offers a perspective indicative of variation within the system, driven by various factors and/or combinations of factors, he does not offer any hypotheses or empirical evidence for the directionality of the effects.

Moreover, certain normative patterns found in EP are not used by speakers of BP, except in the highest registers. One of these patterns is clitic placement in synthetic future and conditional forms:

31 It should be further noted that “even educated [BP] speakers tend to be insecure about their judgments” about object clitic placement (Perini 2002:389; cf. Simões 2006).
(26) a. Falar-<i>te</i>-ei.  (Dir-<i>te</i>-ei.)  (formal BP)

b. Vou <i>te</i> falar.  

‘I will tell you.’

Perini (2002) explains that BP speakers have difficulty using the synthetic future tense with a clitic, thus preferring (26b) to (26a). A final difference is interpolation, or the insertion of a negative particle or adverb between the proclitic and its verbal host. While this is possible under certain conditions in EP, Perini (2002) states that it is not acceptable in BP.

### 2.3.3 Clitic objects in Spanish

Clitic object pronouns in Spanish include dative and accusative forms that are placed before or after the verbal host based on the morphological shape of the host. With respect to placement, Ordóñez (2012) explains that clitic objects in Spanish precede tensed verbs and follow nonfinite forms including infinitives, gerunds, and (affirmative) imperatives. This follows from placement in Old Spanish, which allowed proclisis with finite verbs except when the verb was the first element of the phrase, in which case the Tobler-Mussafia law pushed the clitic into second position to eliminate an unstressed unit in first position (cf. Nishida 1996, Fernández Soriano 1999). Thus, clitic placement in modern Spanish has been described as follows:

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32 Mateus et al. (2003:865-866) say that there is “free variation” in clitic placement with respect to the synthetic future forms in EP, with a general tendency toward more enclisis (e.g., <i>telefonarei-te</i>). Vigário (1999) also notes that variation of this sort is common in EP.
The generalization of these patterns would suggest that clitic placement in complex predicates results in enclisis to the infinitive, as in (27d). And, indeed, even the Real Academia’s grammar leaves this to be inferred, with no mention of the variability of clitic placement in contexts where so-called ‘clitic climbing’ can occur (RAE 2009). However, both of the following patterns can be found:

\[(28)\]
\[
a. \text{V}_{\text{finite}} \text{ V}_{\text{infinitive/gerund}} = \text{CL} \\
b. \text{CL} = \text{V}_{\text{finite}} \text{ V}_{\text{infinitive/gerund}}
\]

As discussed in detail in §2.2, the case of (28b) is an example of what has been described as ‘clitic climbing’, with an auxiliary or modal verb as the finite form. Fernández Soriano (1999) addresses this variation superficially, explaining that either option is available to speakers under the right conditions. For example, he suggests that the elements that can come between the two verbs in such sequences and still allow proclisis as in (28b) are quite limited: “ni pueden aparecer ni la negación, ni otros adverbios, ni cuantificadores de ningún tipo” (‘neither negation nor other adverbs or any kind of quantifier can appear between the verbs’) (Fernández Soriano 1999:1262). Similarly, the clitic objects themselves must function as a block if multiple object pronouns associate with the same
verb form, meaning that both clitics in such a case must be placed together either preverbally or postverbally.33

With respect to the variation in placement, Fernández Soriano (1999) offers a list of constructions with accusative objects that disallow preverbal (28b) placement. This list includes creer, negar, lamentar, parecer, and convenir, providing evidence of restrictions on the freedom of clitic placement in complex predicates. This author does not further elaborate on preferences in placement or other restrictions with verbs that have more auxiliary and modal uses and that more readily accept preverbal placement.

2.3.4 Summary
As can be seen in the above sections, clitic placement in EP, BP, and Spanish differ considerably, both in terms of the typical placement options but also the conditions under which multiple placement options are available to speakers. The following sections will build on the rules and explanations offered by the grammars considered above by providing empirical evidence for the constraints on variable object expression and placement options in Portuguese and Spanish.

33 The author provides the following examples with a “dative construction”, which does not allow for ‘climbing’ of the accusative clitic. In this case, the dative and accusative clitics cannot function as a clitic cluster in their placement (Fernández Soriano 1999:1263):

   a. Me permitieron educarla.
   b. *Me la permitieron educar.
      ‘They let me educate her.’

She explains this as an issue related to the raising of ‘personal clitics’ in dative constructions. In essence, the dative construction with permitir makes necessary the preverbal placement of the dative clitic me that must associate with the first verb, while disallowing the climbing of the accusative clitic that must associate with the second verb. However, she notes that the following construction is possible:

   c. Te dejó arreglarlos.
   d. Te los dejó arreglar.
      ‘He let you fix them.’

(Fernández Soriano 1999:1263)

Although the author does not offer an explanation for why (d) is acceptable but (b) is not, I posit that the difference could be related to animacy constraints (human in (b), inanimate in (d)), as well as differences in verbal properties (e.g. frequency, collocational strength) between permitir and dejar.
2.4 Variation in objects in Portuguese & Spanish

2.4.1 Variation in object expression
In this section, I discuss research that has looked into questions of variable object expression in Spanish and Portuguese. Because object expression is crucial to object placement, this section will provide insight into potential factors that may require further study with respect to patterns of pronominal object clitic placement.

2.4.1.1 Object expression in Spanish
In her study on propositional null objects in Mexican and Peninsular Spanish, Reig Alamillo (2009) investigates the occurrence and non-occurrence of propositional direct object lo. Using data from corpora of non-task-oriented spoken interviews, the author extracts a total of 1324 tokens, with approximately half representative of Mexican data and the other half from Peninsular data. This author uses both raw frequency counts and logistic regression in Goldvarb X (Sankoff, Tagliamonte & Smith 2005), with results that point to dialectal differences in the conditioning factors for null expression of propositional objects. In essence, a much higher rate of nulls is found in Mexican Spanish. The author includes various factor groups based on observations and intuitions from previous studies, as well as observations from her data, including: verb tense, verb person, sentential polarity, sentence type, presence or absence of a dative pronoun, antecedent type (question vs. declarative), and presence of adverbial ya and manner adverbs.

In Peninsular Spanish, null lo is affected by the following factors: transitivity (monotransitives favor null expression), type of antecedent (antecedents in interrogatives favor null, while declarative antecedents disfavor null), and polarity (negatives favor null, ...
due to the effect of high frequency no (lo) sé ‘I don’t know’). The regression analysis of Mexican Spanish selects more factors but also includes all of the factors with the same directional effects included in the results for Peninsular Spanish. The additional factors found to play a role in the null usage in Mexican Spanish are the presence of a manner adverbial (when present, null objects are disfavored, although the presence of *ya* ‘already’ strongly favors null) and sentence type (with non-declaratives favoring null).³⁴

Prior work on anaphora suggests that shorter anaphoric expressions indicate high accessibility of the antecedent, and longer anaphoric expressions typically are used when the antecedent is less accessible in discourse (cf. Ariel 1990, Ariel 1994). To operationalize this hypothesis with the idea of expressed propositional *lo* as the longer expression in comparison to a null anaphoric expression, the author uses three measures: referential distance, the number of times in discourse that there is reference to the proposition (i.e. a rough measure of topic persistence), and if the last reference of the antecedent is in the same or a different turn. To measure referential distance, one must count the number of clauses back from the null/expressed *lo* to the proposition to which it refers. She find that null objects do not become more frequent when the referent is referred to many times in discourse, a result that contradicts theories of accessibility.

By limiting her study to propositional direct objects, Reig Alamillo is able to discuss in detail the workings of propositional anaphora cross-dialectally. Her results suggest similarities in constraints between different varieties, but they also suggest differences between what is expected from linguistic theory and what is actually borne

³⁴ Reig Alamillo considers social factors that provide evidence for a change in progress in Mexican Spanish (social factors are discussed in §2.6).
out in language use.

Schwenter (2006) considers a broader approach to the study of object expression in Spanish, along with the addition of Brazilian Portuguese. With respect to Spanish, he notes that null objects are allowed in many (especially American) dialects of Spanish when the referent is non-specific, as in (29) below.

(29) Fui a la tienda a comprar café pero no tenían Ø.

‘I went to the store to buy coffee but they didn’t have (any).’ (Schwenter 2006:27)

However, in line with Reig Alamillo’s (2009) findings, some dialects show a more robust pattern of null direct object object use than others. Specifically, ditransitives in numerous dialects of Spanish allow for reduction from se lo(s)/la(s) to le, which in prior work has been characterized as object drop (e.g. Kany 1945). While this kind of so-called null object, as well as propositional null objects of the sort discussed by Reig Alamillo (2009), is widespread and relatively robust, anaphoric null objects in monotransitive clauses can be found in certain dialects of South America. Focusing on data available for Quiteño Spanish and Paraguayan Spanish, Schwenter (2006) shows null direct objects in monotransitives to be those that are part of the central class of accusative objects, namely inanimates:  

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35 While inanimates have high rates of lacking overt marking in these varieties, animate direct objects (typically human referents) are often coded by the use of le (the erstwhile dative form), resulting in quite low rates of expression of the accusative lo/la forms (cf. Schwenter 2006:30).
(30) A: ¿Dónde encontraste esa blusa?
‘Where did you find that blouse?’
B: Ó Compré en el mall.
‘I bought (it) in the mall.’ (Schwenter 2006:30)

This usage is parallel to that found in Brazilian Portuguese (BP), which is discussed below in §2.4.1.2. Meanwhile, the marking of animate and specific objects as NPs in Spanish requires the ‘accusative a’ placed before the object NP. Schwenter (2006) demonstrates that where this ‘accusative a’ is necessary in Spanish, object pronouns (i.e. le(s)) are coded overtly in Quiteño and Paraguayan dialects, while the referents not requiring this marking in other varieties of Spanish (that is, the inanimate/non-human, unspecific, indefinite referents) are the objects that typically are left unexpressed in these dialects. This, he argues, is a case of Differential Object Marking (DOM), whereby certain kinds of accusative objects receive special marking that other (prototypical) accusative objects do not.

Some constraints to note for object expression in dialects of Spanish that allow for null accusative objects are verb tense, verb person, sentence type, and also animacy, specificity, and definiteness of the referent. For dialects that allow for propositional null objects, transitivity, polarity, presence of manner adverb vs. ya, and referential distance also play a role.

2.4.1.2 Object expression in Portuguese
Anaphoric direct object expression in Portuguese has been explored in the literature from
both variationist and formal syntactic perspectives (Raposo 1986, Cyrino 1997, Schwenter & Silva 2003, Schwenter 2006, and Schwenter 2013a, Schwenter 2014, *inter alia*). The study of variation in the expression of objects in Portuguese has largely focused on third person accusative forms (Schwenter & Silva 2003, Schwenter 2006, Schwenter 2013a, Schwenter 2014), with dialectal differences found between Brazilian Portuguese (BP) and European Portuguese (EP). In this section, I will outline the constraints that are found to affect null object expression in both of these varieties of Portuguese.

While null anaphoric direct objects are rampant in BP, lower rates of null usage are found in EP (compare 72.5% in BP to 40.6% in EP for null third person objects [Schwenter & Silva 2003, Schwenter & Silva 2010]). However, the factors that constrain null expression in the two varieties are quite similar. Schwenter & Silva (2003, 2010) conduct variationist analyses with data from spoken BP (1253 tokens) and EP (909 tokens) corpora. They code the dependent variable into one of the following three categories: null, lexical NP, or clitic (EP)/tonic (BP) pronoun, with three separate Varbrul analyses to account for factors conditioning the selection of each variant. By conducting an analysis for each variant in each variety of Portuguese, the authors are able to determine a) which factors condition the expression of the three kinds of objects (null, lexical NP, and clitic/tonic pronoun), and b) in what ways the favoring/disfavoring relationships overlap between the two dialects. As mentioned in §2.4.1.1 with respect to null objects in Spanish, animacy, specificity, and definiteness are key to the expression of clitic (and in BP, tonic) pronouns in these languages, while null objects favor inanimate and indefinite, as well as plural, referents.
Schwenter (2006) draws parallels between arguments made about DOM in Spanish, object expression in BP, and null object dialects of Spanish (i.e. Quiteño and Paraguayan varieties). The author uses measures of referential distance (RD), which requires counting clauses back to the antecedent, and topic persistence (TP), which is calculated by adding up the number of mentions that the referent receives in the following ten clauses (Schwenter 2006; cf. Myhill 2005). These two measures operationalize the question of topicality: in essence, a more topical referent will be closer to prior mentions, which would result in a lower RD score, and it will also be brought back into the discourse more after the reference in question is made, resulting in a higher TP score. It has been shown in prior research that human referents for definite NPs tend to have lower RD scores and higher TP scores (Bentivoglio 1983), which translates into higher topicality. Schwenter (2006) predicts that less topical DOs are the more prototypical ones, which receive less overt coding (i.e. nulls or lack of “accusative a” in Spanish), while more topical DOs receive more coding (i.e. clitic/tonic pronoun in Portuguese or accusative a + NP in Spanish).

These measures of topicality can be used to test hypotheses about accessibility in BP and EP, much like in Reig Alamillo’s (2009) study of propositional null objects in Spanish. Once again, the expectation is that highly accessible referents—or those with the lowest RD and highest TP—should receive minimal coding (i.e. nulls), and the less accessible referents—those with the highest RD and lowest TP—should receive more coding (e.g. lexical NPs). Schwenter & Silva (2010) go about testing this hypothesis using t-tests to compare RD and TP scores for each of the three variants in each variety of Portuguese. Their results suggest that lexical NPs are indeed used for EP referents with
lower accessibility, and clitics (and tonic pronouns) are used for EP (and BP) referents with higher accessibility. However, null DOs do not follow the predictions from accessibility-based theories, which would posit that null coding should be the most accessible and have the lowest RD and highest TP.  

Animacy, specificity, and definiteness constraints have been shown to play a key role in the (non)expression of object pronouns in both Brazilian and European Portuguese. Topicality has also been considered as a factor in prior analyses, with predictions that forms with lower topicality receive less coding, while forms with higher topicality receive more coding. This hypothesis has been operationalized by RD and TP measures and has not been borne out by the studies on null DOs in BP and EP.

### 2.4.1.3 Conclusions: object expression

The body of work discussed to this point has focused on the expression and non-expression of anaphoric propositional and non-propositional object pronouns in Spanish and Portuguese. These studies have been restricted to third person accusative pronouns and their null counterparts. The general findings suggest that canonical direct objects (DOs)—third person, inanimate, non-specific, and indefinite—are typically unexpressed,

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36 The RD and TP measures in Schwenter & Silva (2010) are presented in two ways, the first of which is of particular interest to the current dissertation. This approach consists of the inclusion of two distinct factors (or factor groups, in Varbrul parlance) in the various logistic regression results tables, as binary variables. RD is considered with the following variants: 1-4 clauses back and 5+ clauses back. TP is provided in the analysis as 0-2 occurrences in upcoming discourse or 3+ occurrences. By considering both measures as binary variables, the analysis suffers from a somewhat simplified coding scheme, unless we expect RD and TP to cluster in this particular way due to some motivated reasons. Within accessibility theory, presumably one would expect a linear relationship between RD/TP and accessibility, such that higher accessibility positively correlates with TP and negatively correlates with RD. The use of a different analytical tool that allows for continuous variables may offer a clearer picture of the relationship to answer the question of whether a binary high-low distinction is motivated, and if so, what an appropriate cut-off between high and low would look like. If, however, the binary distinction is not motivated and the relationship is linear, an analysis that allows for continuous variables could better explain the roles of RD and TP in general, as well as their relationship with object expression in Portuguese.
or, in the case of Spanish lexical NPs, are expressed without the “accusative a”. When direct objects are not prototypical in their features, they acquire a special marker in both Portuguese and Spanish, related to DOM. In BP, that marker is typically realized as an overt pronoun (ele(s), ela(s)) or lexical NP. In EP, that marker is realized as clitic pronoun (-o(s), -a(s)) or lexical NP. And in Spanish, the marking used is a clitic pronoun, object doubling with the ‘accusative a’ (as in, la vi a ella ‘I saw her’), or a full NP with the “accusative a”.

2.4.2 Variation in clitic placement
The placement of dative and accusative object pronouns in Spanish and (primarily European) Portuguese has been of interest to linguists due to the variation found in cases of clitic climbing (cf. §2.2). Spanish allows for the object clitic placement shown in (31), while Portuguese allows for the patterns shown in (32).

(31) a. CL=V
    b. V V_{inf}=CL
    c. CL=V V_{inf} (Spanish)

(32) a. V=CL
    b. V V_{inf}=CL
    c. X CL=V (V_{inf})^{37} (EP)

^{37} In (32c), X indicates a proclisis trigger word that is necessary for the placement of the clitic before the finite governing verb. In EP, preverbal and postverbal placement are both found when there is a single verb, as in digo-te vs. X te digo ‘I say to you’, much like what has been described as ‘clitic climbing’ when a complex predicate is present and the clitic associates with the second verb, as in estou a dizer-te vs. X te estou a dizer ‘I am telling you’. While the variation clitic placement in complex predicates is traditionally
d. $V=CL \ (V_{\text{inf}})$

The patterns shown in (31b-c) and (32b-c) have been widely discussed in the literature (e.g. Crysmann 1997, Luís & Sadler 2003, Luís & Otoguro 2004, Schwenter & Torres Cacoullos 2014a). The (b) variant is described as the prototypical placement option, such that the object clitic is attached to its syntactic host, and the (c) alternate is what has been described as clitic climbing (CC), whereby the clitic ‘climbs’ to a higher part of the syntactic structure and away from the verb with which it associates semantically. In this section, I briefly describe the work that has been done using quantitative methods in each language, focusing on the factors that have been suggested as having a significant effect on placement patterns.

2.4.2.1 Variation in clitic placement in Portuguese

Very few quantitative studies have been conducted on object clitic placement in Portuguese. In this section, I will briefly introduce the work that has been done on this topic, with reference to three key studies.

Davies (1997) offers a preliminary diachronic approach to CC in EP that also called ‘clitic climbing’, the variation in placement in simple predicates is considered an unrelated phenomenon. This is distinct from the situation in Spanish, which requires preverbal placement in the presence of a single finite, non-imperative form (31a) and allows for preverbal or postverbal placement in the presence of two verbs (31b-c). Basic BP patterns are laid out in general terms in §2.3.2. Because of the inherent differences in clitic placement found between simple and complex predicates in Portuguese, I choose to avoid the term ‘clitic climbing’ in favor of ‘clitic placement’ or more specifically, ‘proclisis’ and ‘enclisis’.

(32d) also reflects what has been called clitic climbing (cf. Andrade 2010c), but this variant will not be discussed in this section. Please also note that the use of the term clitic climbing (CC) is not indicative of any theoretical syntactic assumptions on my part, but rather simply the preverbal placement of the object clitic in compound predicates.

On the other hand, there are many studies that have the goal of explaining placement patterns in EP within various formal frameworks. When variation is mentioned in formal studies, it is typically attributed to the realm of Performance, incomplete acquisition, and/or speech errors.
includes some modern BP data. Davies limits the envelope of variation to eight governing verbs which he classifies as either high frequency or low frequency. The high frequency verbs are poder ‘to be able’, querer ‘to want’, and dever ‘should’, and the low frequency verbs are desejar ‘to wish’, esperar ‘to hope’, acabar de ‘to have just (Xed)’, começar a ‘to begin’, and deixar de ‘to stop’. With a total of 5000 tokens, Davies finds higher rates of CC with high frequency verbs and lower rates with the lower frequency verbs. This result he attributes to patterns from Old and Middle Portuguese, in which low frequency verbs are found commonly with clitics in ‘medial’ position (between the two verbs) and high frequency verbs show near-categorical preverbal placement. He further finds that EP shows a general decrease in CC, particularly between 1700 and 1900, while modern EP contains the greatest amount of CC in the most conservative registers. He further argues in favor of a connection between subject expression and and clitic placement, with null subjects resulting in higher rates of CC in EP. However, Davies’ study contains numerous methodological issues that call into question the validity of his findings, the main drawback being that there is no separation of the data by contexts that largely produce proclitic placement. That is, it remains unclear to what extent the cases of CC are a result of the syntactic conditioning (i.e. the presence of preverbal trigger in the data) and to what extent the result is truly due to the absence of an overt subject, the frequency of the verb, and other register and dialectal conditioning factors. The nature of the quantitative methodology employed in this study also results in less confidently viable conclusions (further explored in §3.1.3).

Andrade (2010c) offers a more complex analysis using a variationist approach in

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40 This register difference is explored more in §2.6.3.
his paper on CC in modern EP. With a total of just over 1000 tokens and the use of Goldvarb X for his regression models (cf. §3.1.3.2), he considers the following factor groups: clitic function, syntactic context, intervening elements, and verbal frequency. He finds that clitic clusters and dative clitics favor CC, while accusative and reflexive/inherent clitics disfavor climbing. In essence, accusatives and reflexives favor postverbal placement; with respect to reflexives, this aligns with observations by Davies (1995) for Spanish placement patterns. This effect is explained as related to topicality, such that clitic groups and dative clitics are inherently more topical (more human/animate) than accusative and reflexive ones. That is, accusatives are typically inanimate and reflexives are coreferential with the subject, which, according to the author, results in lower topicality. In the case of inherent (and potentially also reflexive) pronouns, which are required by the verb and do not have a typical accusative or dative function, we can understand their behavior as considerably more affix-like due to the fact that they have undergone semantic bleaching and become part of the lexical item (cf. Bybee 2011). Under this interpretation, these pronouns would be expected to remain affixed to their host.41

In contexts that the author determines to require proclisis, rates of preverbal placement are relatively high (53.5%), resulting in a favoring effect for CC; meanwhile, in contexts where proclisis is not ‘required’, preverbal placement is strongly disfavored.42

41 This does not give a clear picture of what we would expect from EP in the case of a single verb + clitic in a given clause. To understand this better, the fact that inflectional and derivational affixation in Portuguese is all suffixal is key. With that in mind, we can predict preferred postverbal object clitic placement with inherent/reflexive objects in clauses containing a single verb, even in the presence of a proclisis trigger.
42 There are multiple critiques of this approach that should be addressed. First and foremost, the author does not adequately explain which contexts constitute ‘proclisis contexts’ and which are ‘enclisis contexts’. If only 53.5% of the ‘proclisis contexts’ resulted in preverbal placement, this is a novel finding in and of
Verbal adjacency (i.e. V-V with no intervening elements) favors CC, while intervening material between the two verbs disfavors CC. This result is suggestive of greater bondedness between the verbs (cf. Bybee 2007) allowing for CC, which has been understood to lead to syntactic restructuring in environments involving modal, aspectual, and movement verbs (Andrade 2010c). Finally, for the binary group of frequent vs. infrequent verbs, Andrade’s results align with those of Davies (1997), showing that more frequent verbs slightly favor CC and infrequent verbs disfavor CC.43

Unlike the studies discussed up to this point, Vigário & Frota (1998) do not employ a variationist approach but rather offer an account using anecdotal and empirical evidence to unify the so-called proclisis triggers into a single class of function words through their shared phonological properties. Through this approach, the authors offer predictions for where current variation exists in the language due to the weakening of prosodic restrictions on clitic placement in EP.

The authors propose that all proclisis triggers in EP fall into the class of strong function words, which can be divided into two subclasses: Type I includes those words which have word stress but cannot receive focus, while Type II includes words that can be stressed by prosodic position (at the boundary between intonational phrases) but do not carry word stress and cannot receive focal stress. Under this account, que ‘that’ would fall within Type II, and talvez ‘perhaps’ and não ‘not’ would fall within Type I. Vigário & Frota (1998) suggest features associated with each subclass, such that Type I words

43 It is highly likely that the frequency effect is interacting with other factor groups in this analysis (cf. Erker & Guy 2012).
carry the features *strong* and *stress*, while Type II words carry only the *strong* feature. Using these categories, they argue that proclisis triggers have both morphosyntactic properties (i.e. they must crucially be function words) and phonological properties relating to stress and prominence, which are outlined in (33) below.

(33) Vigário & Frota’s (1998) prosodic categorization of function words in EP:

Strong Function Words

Type I: most quantifiers, wh-words, some conjunctions, some subordinators, negative words, simplex adverbs

*Properties: carry word stress, not focusable*

Type II: some conjunctions, some subordinators, complementizers

*Properties: stressable by position, do not carry word stress, not focusable*

Weak Function Words

Type I: articles, prepositions, pronominal proclitics

*Properties: stressable for ‘emphasis’, not stressable by position, do not carry word stress, not focusable*

Type II: pronominal enclitics

*Properties: not stressable for ‘emphasis’, not stressable by position, do not carry word stress, not focusable*

(from Vigário & Frota 1998:19-20, examples 32-33)

Vigário & Frota (1998) further posit that proclitic placement must abide by both
prosodic and syntactic restrictions: 1) in terms of prosody, the trigger and the clitic must be in the same intonational phrase if proclisis is to be found, and 2) syntactically-speaking, the clitic and the trigger must both be in the CP in order to obtain a potentially proclitic environment. If the syntactic constraint is met but the prosodic constraint is not, the result will be enclisis to the verb despite the presence of the proclisis trigger. While this does not explain why variation still occurs in sources for which prosodic variation is not accessible (i.e. written texts), the remainder of their analysis provides predictions for how changes to the restrictions will progress through the EP system. They posit a “dual requirement for clitic hosting” in EP, which essentially puts pressure on the system to place the clitic adjacent to the prosodic host (the trigger) and also to keep the clitic adjacent to the syntactic host (the verb). If both adjacency conditions are not met, there is a conflict that must be resolved. The “recent regression of proclisis” (ibid.:29) can be explained by the resolution of this conflict, such that EP appears to be in the process of becoming a language whose pronominal clitic placement relies only on the syntax and thus whose placement is determined by the verb. That is to say, the clitic favors the maintenance of attachment to the verb itself, as it loses its requirement to lean on the trigger. This analysis is in line with that of Galves & Sandalo (2012), in that it shows that the clitic system in EP has generally become less reliant on phonological cues in favor of the increased importance of syntactic cues. While Galves & Sandalo (2012) are interested in clitic placement in main clauses, Vigário & Frota (1998) suggest similar patterns for contexts of supposed obligatory proclisis.

Furthermore, Vigário & Frota (1998) argue that the change to reliance on only the syntax does not affect all contexts equally at this point, implicating that the system is, in
fact, still undergoing the change. Their data suggest that the Type II subclass of strong function words (e.g. *que* ‘that’) is affected first in the loss of phonological host status, followed by those strong function words of the Type I variety (e.g. *talvez*, *não*). This is expected because Type I words are heavier, bearing lexical stress. Finally, this analysis also predicts a conflict when the verb-clitic sequence is not immediately adjacent to the trigger. Vigário & Frota (1998) suggest that the resolution of this is in favor of the default placement of the object as an enclitic element to the verb. Thus, according to these authors, enclisis can be found in the presence of a proclisis trigger followed by an overt subject:

(34) O Pedro disse que a Maria *deu-lhe* o recado.

*the.masc Peter said that the.fem Maria gave-CL.3sg.dat the.masc message*

‘Peter said that Maria *gave him* the message.’

(Vigário & Frota 1998:30)

Beyond the overt subject prediction above, these authors offer three additional predictions: that enclisis in the context of Type I strong function words is generally not acceptable when linguistic material separates the trigger from the verb (35), that enclisis in the presence of Type II words is generally not acceptable when the trigger and verb are adjacent (36), and that Type I words do not ever allow for enclisis when the trigger and verb are adjacent (37).
Beyond the resolution of competing adjacency conditions, Vigário & Frota (1998) do not offer further insight into the environments under which speakers employ non-normative clitic placement. The present dissertation will take the hypotheses, results, and predictions of Davies (1997), Andrade (2010c), and Vigário & Frota (1998) as a point of comparison in order to determine a more comprehensive picture of non-normative enclitic usage in EP.

### 2.4.2.2 Variation in clitic placement in Spanish

Myhill (1988) offers an early quantitative study of CC—or preverbal clitic placement—in Spanish, focusing on two primary factors. His first focus is on the semantic properties of the governing finite verbs. Myhill hypothesizes that verbs that often express what he calls “grammaticalized meanings” cross-linguistically will display higher rates of CC in
Spanish, while meanings rarely expressed grammatically across other languages will have lower rates of CC. He thus looks at groups of verbs that carry more or less grammaticalized meanings to determine if rates of CC differ across types of meaning.

The following semantic groups are considered: progressive constructions (*estar, ir, venir, andar* + present participle), periphrastic future (*ir a* + infinitive), markers of epistemic modality (*ir a* (irrealis), *haber (de)*, *poder* (impersonal probability)), motion verbs, root modality verbs (*tener que, querer, poder, deber*), and inceptive verbs. Using raw token counts from texts, the data confirm the prediction: verbs that reflect meanings often expressed through inflectional affixes in other languages (such as progressives and the periphrastic future) show higher rates of CC in Spanish, presumably because these meanings are typically more grammaticalized, and the auxiliary verb functions as part of the larger verbal construction.

The second factor that Myhill investigates is the relative topicality of the clitic in comparison with the subject. He defines topicality using Silverstein’s (1976) animacy (empathy) hierarchy, adapting it for the case of CC in Spanish:

(38) 2nd person > 1st person > 3rd person human singular > Other 3rd person

(Myhill 1988:358)

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44 Myhill’s Animacy Hierarchy is atypical in its ranking of 2nd person over 1st person, and his analysis relies on this unusual ranking. Myhill (1988:357) justifies this ranking, asserting that:

“The precise realization of the [animacy hierarchy] differs from language to language […] Forms representing speech-act participants (i.e. 1st and 2nd person pronouns) are higher than other NPs [on the animacy hierarchy]; in some languages 1st person outranks 2nd person, while in others the reverse is true”.

With respect to the case in Spanish, Myhill (1988) does not provide evidence for the ranking of second person over first person.
In the cases where the clitic is higher in animacy than the subject within this hierarchy, CC is favored in Spanish; the opposite is shown to be true when the clitic is lower than the subject in this hierarchy. Myhill further separates his data by verbs that favor CC and verbs that disfavor CC in order to evaluate the role of the animacy hierarchy within each semantic grouping. Although rates of CC remain relatively high within all the classes of verbs that favor CC, the rate of CC is somewhat lower (60%) when the subject outranks the clitic in animacy when compared to cases where the clitic outranks the subject (91%). The same is true among the group of verbs that disfavor CC: when the subject outranks the clitic in animacy according to his scale in (37) above, the rates of CC are even lower (10%) than when the clitic outranks the subject (30%).

Davies (1995) also considers animacy in his study of CC in multiple varieties of Spanish in spoken and written registers. Rather than looking at relative animacy, Davies considers a more simple measure and finds that animate clitics in Spanish ‘climb’ more readily than inanimate ones. Using similar quantitative methodologies—raw token counts and descriptive statistical measures—Davies (1995) finds a somewhat contradictory result of a lower rate of CC with reflexive pronouns, which typically index animate referents. Notably, however, reflexive forms are not anaphoric, which could potentially explain this seemingly contradictory result. Another result found by Davies that reflects

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45 If this holds true for EP, it provides a small piece of evidence against anecdotal data (J. Costa, p.c.) suggesting that 3rd person accusative objects in EP will always ‘climb’ to the beginning of the phrase in the presence of a trigger element. The data in the latter half of Chapter 4 also conflict with this claim, and subject animacy clearly plays an important role in the clitic placement.  
46 Reflexive pronouns are also equal to the subject in terms of animacy, if we follow Myhill’s (1988) generalizations.
Myhill’s (1988) work is that there exists quite a bit of variation by verb type.\textsuperscript{47} Of particular note within Davies’ data is his finding that CC is more common in the presence of ditransitives with multiple clitics (cf. Andrade 2010c in §2.4.2.1). Finally, Davies accounts for two preceding environments: the complementizer \textit{que} ‘that’ and coordinating conjunction \textit{y} ‘and’. His Spanish data display a slightly higher rate of CC in the presence of \textit{que} (79\% vs. 73\% in spoken data; 32\% vs. 30\% in written data)\textsuperscript{48}, which parallels what is expected in the presence of trigger words in EP (including \textit{que} but not \textit{e} ‘and’) that result in high rates of preverbal object clitic placement in this variety. Davies takes this trigger effect in Spanish to be a relic of patterns found in Old Spanish.

The final work to be discussed in this section uses a different methodological approach than the two mentioned above. Schwenter & Torres Cacoullos (2010, 2014a) employ variationist methods using Goldvarb X to look at placement patterns of only 3rd person accusative objects (excluding clitic clusters) in Mexican Spanish using spoken corpus data. Their study addresses the question from a change-in-progress perspective, whereby they posit that the innovative trend of preverbal placement has been spreading through the linguistic system in a gradual way. This study finds the following factors to constrain the variation in placement: construction type, animacy/referentiality, and topicality (operationalized by anaphoric and cataphoric measures of RD and TP, respectively). Notably, their measurements of topicality using RD and TP are much more granular and discourse-dependent than Myhill’s (1988) approach, which relies on simple

\textsuperscript{47}Davies (1995) includes a page-long list of verbs with their rates of CC overall as well as by register (written vs. spoken). Unlike Myhill (1988), the verbs are left unclassified by semantic type.

\textsuperscript{48}Davies does not look into whether this difference reflects a statistically significant effect. Using Davies’ raw numbers (p. 376, reproduced in Figure 1 in §3.1.3.1) and a chi-square test, however, it is discernible that this difference is indeed statistically significant in both registers at the $p < 0.001$ level.
relative animacy based on subject person and number. Their results show that the
collection or verb involved has the greatest effect on maintaining postverbal
placement, which they hypothesize to be related to the extent to which a construction is
grammaticalized—essentially the extent of the fusion between the verbal constituents (cf.
Bybee 2007, Ch. 14), likely related to frequency effects. In fact, Schwenter & Torres
Cacoullos (2014a) consider the most frequent verbs in their data set (those with 50 or
more occurrences: ir a, poder, querer, tener que, and estar) and less frequent ones (30 or
fewer tokens), and they find that less frequent, less grammaticalized verbs are the ones
that show the most enclisis, while more frequent and more grammaticalized verbs are
characteristic of more proclisis. Contrary to both their predictions and the results found in
prior studies, including those by Myhill (1988) and Davies (1995), these authors find that
inanimate referents favor CC, while animate and non-referential clitics favor postverbal
(enclitic) placement. They show this effect to interact with their topicality measures: that
is, antecedents of inanimates are more likely to occur closer to the clitic in prior
discourse, while animate referents occur generally further back (as a measure of RD).
Human referents tend to have more postverbal placement, and they also tend to be more
persistent than inanimates. However, the rate of postverbal placement is consistently
higher for animates than inanimates for both persistent and non-persistent topics. The
results for TP, which is selected as a significant predictor of the variation in their logistic
model, indicates that postverbal placement is maintained for referents with lower
topicality (i.e. lower TP scores for both animates and inanimates). The results differ
between this study and Myhill’s (1988) work due to differences in the tests: while Myhill
looks at relative animacy of subject and object, Schwenter & Torres Cacoullos look at the
continuity of the referent of the object within discourse as an indicator of topicality. In essence, Myhill (1988) tests for relative animacy in the most basic terms of person and number without consideration for the actual animacy or repetition of any given subject or object, while Schwenter & Torres Cacoullos (2010, 2014a) operationalize topicality for each token through RD and TP measures. Given their results, Schwenter & Torres Cacoullos (2014a:532) argue that the “ongoing shift toward proclisis [preverbal placement] affects the central members of the class of DOs, i.e. inanimates, before 3rd person DO clitics with human referents”. In addition to the construction type and frequency effects, the main conclusion that these authors draw is that more prototypical DOs—inanimates—that show non-prototypical DO behavior—as more persistent in discourse and thus more topical—are precisely the forms that result in higher rates of proclisis.

These results presented by Schwenter & Torres Cacoullos (2010, 2014a) conflict with Myhill’s (2005:480) cross-linguistic generalization that “preverbal arguments have on average a higher RD than postverbal arguments”, given that these authors find that object pronouns that are inanimate (with lower RD) tend to occur more commonly in preverbal position than animates, whose referents are found further back in the discourse. However, while it is likely true that preverbal arguments in the form of subjects typically have a higher RD than postverbal arguments, which are typically objects, the extension of RD beyond this dichotomy between position and argument type to atypical placements with respect to object pronouns means very little without quantitative evidence. Schwenter & Torres Cacoullos (2014a) provide just this sort of evidence, finding that such a statement is not true for anaphoric direct objects in Spanish. This dissertation will
build on Schwenter & Torres Cacoullos’ (2014a) findings by maintaining a strictly quantitative approach to topicality, by considering object pronoun placement in Portuguese in environments that are thought to require preverbal placement, and by including both RD and TP measurements. As will be explained further in §3.2.2.1.4, I will also expand on Schwenter & Torres Cacoullos’ (2014a) use of topicality by incorporating the measurements proposed for total topicality by Shain (2009).

Schwenter & Torres Cacoullos (2014b) build on their prior work by showing that the top three most frequent constructions of estar + gerund, ir a + infinitive, and poder + infinitive display different trends when compared to other similar restructuring environments. The primary difference found involves the rates of enclisis between the two verbal groups and their interactions with the animacy factor. Although animate and human clitics often appear postverbally across all verbs, there is a larger difference between the inanimate and animate placement patterns for these three most common verbs than for the others under consideration. The ‘big three’ generally show a lower rate of enclisis than other verbs, but with animate DOs, the rate of enclisis is higher in the presence of these verbs than for other verbs. Furthermore, using a conditional inference tree, these authors show through the two-way branching of significant predictors that estar + gerund and ir a + infinitive reflect a grammaticalized category significantly different from poder + infinitive. These results in combination suggest not only that construction type is highly dependent on the verb itself but also that the interaction between construction type of the verb and animacy of the object offers evidence for the interrelatedness of variables that are often considered independently of one another.
2.4.2.3 Summary

In this section I have presented prior work on clitic object placement in two-verb sequences in Spanish and Portuguese. While some studies have restricted their envelope of variation to particular dialects or certain kinds of clitic objects, others have included broader datasets, resulting in studies that are not entirely comparable. However, considerable evidence has been presented for shared constraints between the studied discussed above. The studies presented in the above sections have found the following factors to condition the variation on object placement in Spanish and Portuguese:

a) animacy (Davies 1995; Schwenter & Torres Cacoullos 2010, 2014a, 2014b; Andrade 2010c [topicality/clitic type]; Myhill 1988 [relative animacy])

b) topicality (Andrade 2010c; Schwenter & Torres Cacoullos 2014a)

c) clitic clusters (Davies 1995; Andrade 2010c)

d) reflexivity (Davies 1995; Andrade 2010c)

e) presence or absence of explicit subject pronoun or NP (Vigário & Frota 1998; Davies 1997)

f) certain trigger words or prior contexts (Vigário & Frota 1998; Davies 1995; Andrade 2010c)

g) intervening elements between verbs (Andrade 2010c)

h) verb or verb class (Myhill 1988; Davies 1995; Schwenter & Torres Cacoullos 2010, 2014a, 2014b; Davies 1997)

i) verbal frequency (Davies 1997; Andrade 2010c; Schwenter & Torres Cacoullos 2014a)
Some of the factors listed above have been found to constrain both object expression and object placement. By considering expression and placement patterns together, a clearer picture of the variable grammar emerges.

2.5 Grammaticalization and Frequency Effects in Grammar

2.5.1 Grammaticalization Theory and Clitics

The study of grammaticalization processes delves into the gradual semantic and structural change affected by the frequent usage of forms or constructions in the presence of certain lexical items. This process follows “cross-linguistic evolutionary paths” (Torres Cacoullos 2011:149) in which a transparent concatenation of units becomes an opaque grammatical construction, often involving a category shift (cf. DeLancy 2011, Haspelmath 2011, Torres Cacoullos 2011, inter alia). The category shift that occurs and the constructional opacity that results is reflected in the increased bondedness of the units within a grammaticalized construction and in the loss of morphological boundaries (Diewald 2011, Torres Cacoullos 2013). The historical development of clitics as an intermediate class of diverse elements cross-linguistically is representative of these grammaticalization processes, and the grammaticalization of both clitics and their verbal hosts in Romance languages plays a role in placement patterns.

Clitics reflect a distinct stage in the process of coalescence, by which units show “a gradual increase in bondedness or tightness of combination, reflected in a variety of diverse changes that need not coincide perfectly” (Haspelmath 2011:346). The trajectory in grammaticalization typically starts with a lexical item, which through coalescence can
become first a functional item, then a bound word or clitic, followed finally by an affix 
(\textit{ibid.}, Hopper & Traugott 2003, Galves & Sandalo 2012). Thus clitics themselves 
represent a stage between full word and morphological affix in the grammaticalization 
process, or they represent a stable fuzzy category. This fact in and of itself affects clitic 
placement, in that these units are not free to appear in varied sentential positions but do 
show more freedom of host selection than affixes. With respect to Spanish and 
Portuguese, EP functions quite differently from its sister varieties because its clitics have 
become more grammaticalized, a fact which affects placement in this variety. Galves & 
Sandalo (2012) suggest that clitics in EP are in the process of becoming affixes, an 
analysis that predicts that enclisis in normative proclisis contexts is a change in progress 
that will continue until all clitic objects in EP are placed postverbally regardless of the 
surrounding linguistic context. Other grammaticalized units can also affect clitic 
placement, including the verbal hosts upon which the clitics lean. This question and its 
relation to verbal frequency are discussed in the following section.

\textbf{2.5.2 Grammaticalization and lexical frequency}

Torres Cacoullos (2013) suggests that clitic climbing in Spanish is an indicator of the 
grammaticalization of the complex verb phrase. That is, it has been suggested that clitics 
move more easily within a complex verb phrase when the first verb functions as an 
auxiliary and thus contributes more grammatical rather than semantic information to the 
phrase (cf. Myhill 1988). In such cases, the verb phrase reflects what Torres Cacoullos 
(2013) has labeled “advanced unithood”, since the verbal sequence comes to function like 
a single verbal unit. The grammaticalization of verb phrases happens gradually over time 
and thus should be expected to gradually affect clitic placement. The effect of the
gradient grammaticalization of complex verb phrases has been found in Schwenter &
Torres Cacoullos’ (2010, 2014a) Mexican Spanish data (cf. §2.4 above).

Lexical frequency strongly affects diachronic changes and grammaticalization
2011) offers a framework with which to understand the effects of usage and frequency on
language change. Within usage-based theory, language structure is emergent, or created
through use, and frequency can be part of both the cause and the consequence of
linguistic change (Wichmann 2011). This theory highlights the importance of “frequency
of use, the patterning of linguistic structures within the discourse context, and the
pragmatic inferences that accompany language used in interaction” (Bybee 2011:69-70).

Grammaticalization under a usage-based approach has been largely thought to be
unidirectional within all aspects of the grammar. In phonetic terms, change results in
reduction (in duration or units) or coarticulation, due to the automation of articulatory
pathways; semantic change results in the move from a lexical to a grammatical category;
and morphosyntactic change leads to a reduction in constituent structure by which
decagorialization occurs and constituent analysis is no longer possible (Bybee 2011). For
clitic placement, this view predicts that high frequency verbal constructions can
grammaticalize with the result of a reduction in the constituent structure of the complex
verb phrase. This would result in a single verbal constituent along with the loss of
semantic analyzability of the two verbal components. However, the unidirectionality of
the change is central to the theory and must be considered carefully in the study of
variation in clitic placement. Specifically, the trends in Spanish and EP diverge, with the
Spanish system displaying generalized proclisis and the EP system showing generalized enclisis. Given this, it is unlikely that both systems show change promoted through grammaticalization. As Bybee (2011:78) states, “only when increases in frequency spur all the mechanisms to work together do we recognize an instance of grammaticalization”. If an increase in verbal frequency is correlated with a loss in constituent structure and analyzability, one would expect increased rates of the patterns found in simple predicates in each variety; in Spanish and BP, the expected result would be more proclisis. Meanwhile, the situation in EP would be somewhat more complex, since the generalized pattern is enclisis to lexical verb. More grammaticalized verbal constructions, then, might show increased rates of clitic climbing resulting in enclisis on the finite or governing verb, or proclisis to the finite verb in the presence of proclisis triggers. However, if high verbal frequency is not correlated with a reduction in constituent structure, then grammaticalization is not the cause of the frequency-related patterning. The question of whether grammaticalization of verbal constructions affects the variation in clitic object placement in EP and BP will be explored through the lens of token frequency in Chapters 4 and 5, respectively.

2.5.3 Lexical frequency and object clitic placement
In addition to the broad question of the effect of lexical frequency on grammaticalization, lexical frequency has been shown to affect object clitic placement in both Spanish and Portuguese (for example, cf. Davies 1995, Davies 1997, Andrade 2010c). In these studies, the relationship between lexical frequency of the governing verb and rates of clitic climbing in complex predicates points to high frequency verbs at the forefront of changes in both languages. Essentially, clitic climbing appears to be more common with
high frequency governing verbs than with lower frequency ones. Given the differences in inherent between the two languages—clitic placement determined largely by finiteness in Spanish and by syntactic cues in European Portuguese—the apparent shared tendency must be further explored by taking into account the presence of trigger words as preceding elements in Portuguese to compare their effects with relation to frequency with what has been reported for Spanish (cf. Davies 1995, Table 3).

The study of frequency effects on object clitic placement has primarily focused on a binary distinction between ‘high’ and ‘low’ frequency forms. While the categorical divide is supported in other studies considering the differing effects of high and low frequency forms on the variation in the use of morphosyntactic constructions (c.f. Erker & Guy (2012), who look at subject expression in Spanish), lexical frequency is inherently gradient. Thus, the continuous nature of lexical frequency and its effect on clitic placement will be explored in the upcoming chapters.

Given the unidirectionality of grammaticalization presented in §2.5.2 above, whereby high frequency results in phonetic, semantic, and morphosyntactic reductions of grammaticalized items, the effect of low frequency remains unexplored in relation to clitic placement. With respect to the differences between patterns of change affecting high and low frequency items, Bybee (2002:270-271) argues that, changes that affect high-frequency words first are the result of the automation of production, while low-frequency words change first when the change makes the words conform to the stronger patterns of the language. In other words, analogical change affects low frequency words, while change resulting from grammaticalization affects high frequency words, and both processes progress in
gradient way throughout the system. Since preverbal clitic placement in complex predicates in Spanish is relatively innovative and in Portuguese it is quite conservative in so-called obligatory proclisis contexts, similarities in the constructional effects and the role of lexical frequency of the verbal hosts may indicate that grammaticalization through frequency is promulgating change in one language while frequency is driving analogical change in the other.

2.6 Social factors in the variation of pronominal phenomena

While the study of variation in both Spanish and Portuguese has a robust history, very few researchers seek to bridge the gap between related phenomena in these two languages (e.g. Schwenter 2006, Carvalho 2010, Guy 2014, Armstrong & Cruz 2014). Pronominal phenomena in Spanish and Portuguese offer researchers an object of study with interesting parallels across varieties (Schwenter 2006, Reig Alamillo 2009). My attempt to address the cross-linguistic similarities that may reflect universals in discourse structure leads me to explore object placement patterns in European and Brazilian Portuguese.

In the sections that follow, I will explore the social factors that have been found to constrain pronominal variation in subject expression, object expression, and object clitic placement. I will begin in Section 2.6.1 with geographic factors that have been studied, followed by education- and gender-related findings in Section 2.6.2. Section 2.6.3 will include patterns based on style and register.

49 ‘Clitic climbing’ resulting in enclisis, as seen in example (15c), is innovative in EP. Thus we see a ‘conservative’ pattern of clitic climbing resulting in proclisis, which maintains old patterns that differ from the current placement trends (cf. 16a, b), alongside an ‘innovative’ rearrangement resulting in enclisis (15c).
2.6.1 Variation by geographic location
Variationists have considered subject personal pronouns across dialects, focusing on regional and contact-induced patterns of variation (cf. Bayley 2013). Regional variation shows a continuum with BP and Caribbean Spanish at one extreme and other varieties of Spanish and Portuguese (from Spain, Mexico, and Portugal, for example) at the other (cf. Sainz-Maza Lecanda 2013). Specifically, BP and Puerto Rican Spanish (PRS) have relatively high rates of subject personal pronoun realization (56% and 45% respectively), while EP displays a much lower rate (22%) that is comparable to rates of expression found in Iberian Spanish varieties\(^{50}\) (Lira 1982, Cameron 1992, Barbosa et al. 2005). This regional variation in overt subject pronoun expression is indicative of the ways in which BP and PRS pattern together (cf. Guy 2014), while EP displays similarities to other varieties of Spanish.

As discussed in §2.4.1, variable object expression has been explored in several varieties of Spanish and Portuguese. Reig Alamillo’s (2009) work focuses on comparing Mexican and Peninsular Spanish propositional *lo* expression, showing Spanish speakers to employ overt propositional objects at a higher rate (70%) than Mexican speakers (17%) (Reig Alamillo 2009:389). Thus, while Iberian and Mexican speakers show similar rates of subject expression, these speakers exhibit divergent trends in anaphoric propositional object expression. Other dialects have been described to have more robust application of null anaphoric objects in Spanish, especially Paraguayan (with 90% null inanimate accusatives) and Quiteño (62.8% null inanimate accusatives, with overall null rates around 33%) (Schwenter 2006:28-30). These dialects pattern closely with

\(^{50}\) Interestingly, the rate of subject personal pronoun expression in Mexican Spanish is similarly low (19-20%) (cf. Otheguy et al. 2007, Shin 2012).
Portuguese object expression trends, such that inanimate, nonspecific objects are most likely to receive no explicit coding (ibid.). Schwenter & Silva (2010) find similarities in the constraints on anaphoric null object expression in BP and EP, although the overall rates of expression are quite different: their BP data display 72.6% null forms, while the EP data has only 40.6% null objects, with increased rates of null usage with inanimate and indefinite objects. These dialectal differences are suggestive of the variation in the extent to which grammars of the languages have evolved and forms have become conventionalized to encode discourse patterns.

Object clitic placement patterns also vary between between Spanish and Portuguese and considerably between and within varieties of Portuguese. The general rule for pronominal object clitic placement in Spanish requires clitics to be placed before finite verb forms and after nonfinite forms (e.g. infinitives, gerunds, imperatives), with finiteness as the key to placement patterns much like in other Romance languages (Crysmann 1997, Bosque & Demonte 1999, Luís & Sadler 2003, Luís & Spencer 2005, Russi 2008, RAE 2009, Fiéis, Madeira & Xavier 2013, *inter alia*). Variation in placement is found in contemporary Spanish in verbal sequences containing modal and aspectual auxiliaries and causatives (Myhill 1988, Davies 1995, Bosque & Demonte 1999, Schwenter & Torres Cacoullos 2010). Parallel to regional variation found in subject expression, Davies (1995) shows that object clitic placement can vary greatly by region. In particular, his data reveal that Mexican, Iberian, and Puerto Rican speakers show the

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51 I personally have observed null 2nd person plural accusative forms in BP, but these appear to be much less common than anaphoric 3rd person inanimate null objects.
overall highest average\textsuperscript{52} rates of preverbal clitic placement (between 41\% and 46\%), while South American speakers from Venezuela, Chile, Peru, and Bolivia have the lowest average rates of preverbal placement (33-34\%). The unexpected similarities in preverbal clitic placement for Spain, Mexico, and Puerto Rico may be unique to Davies’ data; for example, he does not explain how much of the data is from contexts or involving clitics that favor certain placements. Clitic placement in Mexican Spanish has been studied more in depth by Schwenter & Torres Cacoullos (2014a), who found a considerably higher rate of preverbal placement—73\% in their oral data, compared to 66\% found by Davies (1995) in spoken data in this variety. Animacy effects play an important part in the variation found in both studies and thus deserve further investigation at the dialectal level in other varieties.

In order to understand the variation found in clitic object placement within and between BP and EP, we must first recall that these varieties show important differences in their generalized placement patterns. BP displays a general preference for clitic placement prior to the lexical verb, as in (39) below (Simões 2006, Cunha & Cintra 2002). EP, on the other hand, has a general preference for postverbal attachment to the lexical verb, as in (40) below (Cunha & Cintra 2002). In these examples, a clause containing a single verb and object clitic usually has a preverbal clitic in BP and a postverbal clitic in EP. In clauses containing an auxiliary or modal verb followed by a nonfinite lexical verb, the same holds: BP prefers preverbal placement (proclitic to the lexical verb), and EP prefers postverbal placement (enclitic to the lexical verb).

\textsuperscript{52}“Average” here is the average between written and oral registers. The effect of register is presented below in §2.6.3.
Both varieties of Portuguese allow for quite a bit of variation, however, especially in the presence of the progressive and future auxiliaries and modal verbs, as in (41a). While the pattern in (41a) is available in both varieties (and in EP as the default), Simões (2006) explains that this construction is only preferred in BP in the presence of clitic object pronouns beginning with a vowel, namely the 3rd person accusative forms o(s), a(s) that trigger allomorphic processes53.

The ordering of constituents shown in (41c) in EP is conditioned by certain preverbal elements, including complementizers, quantifiers, focalized elements, negation, interrogative words, and certain kinds of adverbs (Crysmann 1997, Barrie 2000, Cunha & Cintra 2002, Luís & Otoguro 2004, among others). Perini (2002) claims that this pattern in (41c) is mandatory in BP under the same conditions listed above for EP, but he also

53 Compare: *quero ver o José* ‘I want to see José’ vs. *quero vê-lo* ‘I want to see him’. It should be noted that these forms are the ones that are usually not expressed in BP and that also exhibit relatively high rates of null expression in EP (cf. Schwenter & Silva 2010). When 3rd person accusative forms are indeed expressed in BP—for definite animates, in particular—the tonic forms ele(s)/ela(s) are more commonly selected, as in *quero ver ele* ‘I want to see him’. In terms of rates of tonic vs. clitic expression in BP, compare 3rd person tonic forms at 12% of Schwenter & Silva’s BP data and clitic forms at only 0.3%.
notes that a detailed study on the topic of object clitic placement in BP has not been conducted.

Certain related Iberian languages and dialects also follow the pronominal object clitic placement rules thought to be obligatory in EP, including Asturian and Asturian Spanish (Fernández Rubiera 2009, González López 2013, Barnes, González López & Schwenter 2014), Galician and Galician Spanish (RAE 2009-11). Social factors affect the clitic placement patterns in these varieties. For example, González López (2013) shows that both young and old Asturian Spanish speakers use more enclitics than speakers who acquired the language during Franco’s dictatorship. Moreover, a positive speaker stance toward Asturian and knowledge of Asturian as an L1 similarly increases the rate at which speakers use enclitics in Asturian Spanish. The usage patterns in this variety similarly suggest that clitic placement is variable in languages closely related to EP, indicating that social factors likely also impact the variable clitic placement in this variety. The constraints on the variation in clitic placement in BP have yet to be documented.

In this section, I have described findings regarding geographic and dialectal variation of pronominal phenomena in Spanish and Portuguese. The reported results present similarities in rates of subject expression between related dialects of Spanish and Portuguese, similar constraints on null object usage in BP, EP, and certain South American dialects of Spanish, and some anecdotal evidence of similarities in environments that show a strong preference for preverbal object clitic placement between certain varieties of Spanish and between BP and EP. Meanwhile, BP and EP exhibit important differences in their pronominal object systems (i.e. clitic vs. tonic third person accusative forms, different unmarked placement patterns). Finally, it should be
mentioned that the differences in clitic placement in complex verbal sequences related to properties of the governing verb have been found in various dialects of Spanish (Myhill 1988, Davies 1995), in Mexican Spanish in particular (Schwenter & Torres Cacoullos (2010, 2014a), and in Portuguese (Davies 1997, Andrade 2010c).

2.6.2 Variation by education and gender

Reig Alamillo’s (2009) variationist study offers a tentative first analysis of social factors affecting the selection of null propositional direct objects in Mexican Spanish. These results suggest women, younger people, and those with lower levels of education have higher rates of null expression than other groups. She notes that the null form is not stigmatized and speakers are not aware of their usage of the null object. She interprets these results as indicative of a change in progress, with women selecting the more innovative form independently of education. This, she argues, reflects an example of Labov’s (1990) “change from below”. Changes taking place below the level of consciousness are also typically marked by higher rates of innovative forms by those with lower socioeconomic status, coded here by educational level.

In terms of Portuguese object expression, Schwenter (2006) posits that clitic forms other than 1st and 2nd person are restricted to highly educated speech in BP. Null object use in BP differs from what is found in Reig Alamillo’s work on Mexican Spanish in that it appears to be a stable linguistic phenomenon with clear discourse functions (Schwenter & Silva 2010). This fact suggests that the educational effect that causes increased third person accusative object expression by educated individuals (cf. Schwenter 2006) is related to the Brazilian education system’s imposition of norms that are not in fact part of native BP grammar. In basic terms, this could be understood as a
generalized case of hypercorrection by educated speakers, especially in formal contexts. Similar educational effects can be seen in object placement patterns, such that Galves, Moraes & Ribeiro (2005) argue that third person clitics are only acquired through schooling in Brazil and therefore typically favor EP placement patterns rather than the BP norm.

Object clitic placement has been subject to quite a lot of normative reinforcement in Portuguese. Perini (2002:389) explains that EP placement patterns are taught in Brazilian schools, so BP speakers in general and “even educated speakers tend to be insecure about their judgments in many cases”. From this we can conclude that object clitic placement patterns, and especially those of third person accusative clitic forms, will vary considerably in BP and may be correlated with educational background of speakers, such that more educated speakers may prefer patterns found commonly in EP. EP is similarly expected to show a correlation between more advanced educational backgrounds—or higher registers of speech—and higher rates of normative preverbal placement in triggered contexts. And finally, to my knowledge, no work to date has considered educational or gendered effects in object pronoun placement in Spanish.

2.6.3 Variation by register and style
Anecdotal evidence seems to suggest that speakers also employ more overt objects and greater numbers of clitics over tonic pronouns in higher registers of BP. Perini (2002), for example, distinguishes between formal registers and spoken registers in BP based on the kind of object used: clitics, he writes, are used in written language, while tonic pronouns are used in spoken language. This is likely related to the effect of education, as explained above (cf. Perini 2002:389, Galves, Moraes & Ribeiro 2005, Simões 2006).
Meanwhile, the effect of register has been examined in work on clitic placement in other varieties of Portuguese and Spanish. Davies (1995) shows that, along with variation by Spanish-speaking country, different regions also display variation between spoken and written registers. His data indicate that Mexico, Spain and Puerto Rico have the highest overall rates of preverbal object clitic placement, showing marked differences between registers that do not exist in the varieties with the lowest rates of preverbal placement. That is, the difference between spoken and written registers for varieties that have an overall high rate of preverbal placement is 30-40 percentage points (e.g. PRS shows 56% CC in spoken registers and 26% in written). Those varieties that have overall low rates of preverbal placement differ by only 15-20 percentage points between registers (e.g. Peruvian Spanish has 41% CC in the spoken register and 26% in the written). Davies’ Spanish data thus shows a clear pattern of preverbal placement spreading through spoken language, while writing maintains the more conservative pattern.

In contrast, Davies (1997) finds that more formal registers of BP and modern EP in general have the highest rates of preverbal object clitic placement, and lower registers of BP have the lowest degree of preverbal object clitic placement. This divergence from Davies’ (1995) findings for Spanish is suggestive of possible differences in the directionality of change between these related languages. Similarly, Andrade (2010c) accounts for register, also finding more preverbal placement in formal registers of both written and spoken EP, and less preverbal placement in spoken registers. Andrade (2010c) explains this pattern by way of discursive foregrounding and backgrounding.

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54 It should be mentioned that Davies (1997) uses only texts to determine register for BP, so his more formal register includes essays and his most colloquial register includes data from plays.
55 Andrade makes three register distinctions: formal writings, formal interviews (spoken), and informal interviews (spoken).
techniques. Accordingly, he links enclisis on the main verb to foregrounded material and climbed clitics to backgrounded information, explaining that formal (and written) registers have less need to foreground material. However, this analysis is lacking in empirical evidence; it may be the case instead that his data display a higher rate of enclisis contexts in speech that could be attributed to differences in discourse structure and common ground (cf. Bybee 2010). The register differences found by Andrade (2010c) and Davies (1997) are further explored in Chapters 4 and 5 with respect to proclisis triggered environments in EP and BP. Taken together, these three analyses suggest that BP and EP object clitic placement patterns function similarly with respect to register, perhaps due to the similarities in the patterns taught in formal educational settings (Perini 2002, Simões 2006). Whereas the Spanish varieties referenced above show higher rates of preverbal object pronoun placement in spoken registers, BP and EP display an opposing pattern with higher rates of preverbal placement in formal written registers.
CHAPTER 3. METHODOLOGY

3.1 DATA AND DATA ANALYSIS

3.1.1 Data
The data analyzed in the following chapters come exclusively from the *Corpus do Português* (Davies & Ferreira 2006-). For both varieties of Portuguese, the data include written and oral modes, including spoken interviews, literary sources, and news and scholarly articles.

3.1.2 The variationist framework
The study of variation has received quite a lot of attention in the last half century, and the goal of this methodology is to determine the factors that constrain the “orderly heterogeneity” (Weinreich, Labov & Herzog 1968:100) in the linguistic system (cf. Bayley 2013). In simple terms, the understanding that language has both categorical and variable processes underlies this work, with variationist investigation focusing on the variable systems. The study of variation has been explored within three “waves” of research (Eckert 2012, Bayley 2013, *inter alia*). The so-called first wave seeks to determine linguistic and social constraints on variation within a given population, with particular reference to patterning due to stylistic and socioeconomic stratification. The second wave is more informed by ethnographic work, with consideration given to social networks and different kinds of settings (e.g. home vs. work) that inform social language usage. Finally, the third wave focuses on communities of practice and the construction
and performance of identity through language use. Although these waves have developed chronologically, and phonetic and morphophonological variation is currently studied from all three perspectives, morphosyntactic variation remains primarily entrenched within the first wave and maintains a notable quantitative bent.

The continued study of morphosyntactic variation from a first wave perspective is largely due to two separate issues: 1) the kinds of questions that morphosyntactic variation studies aim to answer, and 2) the availability of the large quantities of data needed in order to generalize patterns within the larger grammatical schema. With respect to the questions that these studies address, the researcher’s goal is to find the underlying pattern within a variable system—or within a system that is often described as displaying ‘free variation’—rather than addressing questions related to the use of a form within a certain community or, at a more micro-social level, the variation found within a few individuals given changes in stylistic and performative environments. Furthermore, since morphosyntactic variables occur much less in natural speech than do phonetic variables, larger quantities of data, particularly from a wider variety of speakers and contexts, are necessary to capture the patterning of the variables under consideration. In order to generalize the patterns found, the data must be varied across a larger and more diverse population or community than the data studied from second and third wave perspectives. Finally, the use of mixed methods or exclusively quantitative methods over qualitative methods derives from the exploratory nature of variationist work within the first wave. As a result, variationist researchers make use of powerful statistical measures. These tools allow them to account for multiple independent variables that influence the variation in order to determine the interaction between the variables and which of them
most strongly affect variant selection. Researchers, accordingly, will often make use of qualitative methods that consider ethnographic data or discourse-pragmatic devices after the preliminary quantitative study in order to discuss micro-social or discourse trends once the larger patterns have been established.

First wave studies seek to follow what is known as the *Principle of Accountability* (Labov 2004), by which “reports of the occurrences of a variant must be accompanied by reports of all non-occurrences” (Torres Cacoullos 2011:151). Such a practice is important in variationist work because it requires the inclusion of both the variant of interest and its competing variants; subsequently, quantitative analysis following this principle can more accurately point to constraining factors and, importantly, show environments that are favorable or unfavorable for the variant of interest without being concerned with noise in the data.

Studies of morphosyntactic variation are interested in questions of form-function asymmetry, in which multiple forms display the same or similar discourse functions (cf. Torres Cacoullos 2011, Poplack, Lealess & Dion 2013). Notably, the form-function asymmetry in object expression and placement in Spanish and Portuguese have been of interest to researchers recently (object expression: Schwenter & Silva 2003, Schwenter 2006, Reig Alamillo 2009, Schwenter 2013a, Schwenter 2014; object placement: Myhill 1988, Davies 1995, Davies 1997, Andrade 2010a, Andrade 2010b, Andrade 2010c, Schwenter & Torres Cacoullos 2010, Schwenter & Torres Cacoullos 2014a, Schwenter & Torres Cacoullos 2014b). In the sections that follow, I outline the research that has been done on object placement in these languages with a focus on those using quantitative methodologies and discuss the factors and methodologies to be implemented in Chapters
3.1.3 Quantitative analyses

As noted in the discussion in Chapter 2, various quantitative methodologies have been utilized in the investigation of object pronoun expression and clitic placement in Spanish and Portuguese. In this section, I discuss some methodological practices employed in the studies referenced in the prior sections, the tools used, and the advantages and disadvantages of each method.

3.1.3.1 Token counts

Much of the early work on variation in object placement in Spanish and Portuguese employs raw frequency counts and descriptive statistics to determine placement patterns. For example, Myhill (1988) analyses 750 tokens from Spanish texts to explore the role of semantic type and the effect of relative topicality on clitic placement. With this data, he classifies tokens by governing verb (e.g. *estar* + present participle, *ir* + present participle, *ir a* + infinitive) and provides the readers with token counts of preverbal and postverbal placement by verb, along with the overall percentage of tokens with preverbal placement. This author similarly provides percentages of preverbal placement with respect to the relative topicality between subject and clitic, showing that there is more preverbal placement when the clitic outranks the subject in animacy/topicality, as discussed in the previous section.

Davies (1995) uses a similar approach with a large quantity of tokens containing sequences of two verbs and an associated clitic in his Spanish corpus. In this work, he

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56 Of these 750 tokens, all were used in the analysis of the effect of semantic type, and a subset of 543 was coded for relative topicality.
counts the number of tokens per verb that display preverbal clitic placement (‘clitic climbing’, or CC). The quantitative approach he takes is thus raw counts with associated percentages of tokens of the variable of interest. He also divides his data by register (spoken vs. written), which allows the analyst to visualize patterns with respect to register. He further codes tokens by country of origin for each token, which offers a breakdown of total preverbal placement overall and by register in each of the regional locations included in his data. The data is further broken down in two ways: raw token counts with percentage of preverbal placement by governing verb, and percentages of preverbal clitic object placement for each of his linguistic variables (reproduced in Figure 1 below).

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>SPKEN</th>
<th>WRITTEN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>[+CC]</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 clitics</td>
<td>.87</td>
<td>369</td>
</tr>
<tr>
<td>1 clitic</td>
<td>.68</td>
<td>5647</td>
</tr>
<tr>
<td>REFLEXIVE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reflexive</td>
<td>.73</td>
<td>2671</td>
</tr>
<tr>
<td>+reflexive</td>
<td>.66</td>
<td>836</td>
</tr>
<tr>
<td>ANIMATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+animate</td>
<td>.76</td>
<td>2601</td>
</tr>
<tr>
<td>-animate</td>
<td>.62</td>
<td>1222</td>
</tr>
<tr>
<td>PRECEDING ELEMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>que</td>
<td>.79</td>
<td>507</td>
</tr>
<tr>
<td>y</td>
<td>.73</td>
<td>131</td>
</tr>
</tbody>
</table>

Figure 1. Percent CC by clitic properties and linguistic environment in Spanish, reproduced from Davies (1995:367, Table 3).

The figure above shows the percentage of (preverbal) clitic climbing tokens that can be classified into each one of the predictor levels, as well as the raw counts of tokens by register (written vs. spoken). Similarly descriptive numbers are included in Davies’ (1997) diachronic study on CC in Portuguese, resulting in similar drawbacks to the study,
as outlined below.

Data of this sort—both what is provided in Figure 1 and other counting measures included in Myhill’s (1988) and Davies’ studies—offer a basic sketch of the general trends for clitic placement in complex predicates in Spanish from a large quantity of data. And notably, the breakdown by governing verb is especially interesting considering the quantity of data that Davies has at his disposal, since small amounts of data are subject to issues related to poor distributions. However, studies of this sort suffer from serious analytical disadvantages. First and foremost, these studies are unable to consider multiple independent variables together, meaning that it is unclear whether all of the factors considered affect the variation or if a single factor is responsible for a significant portion of the variation. Along the same lines, the readers are left uninformed about which factors constrain the variation in a statistically significant way. In essence, it is possible that Davies’ (1995) data includes only animate referents in the presence of a preceding *que*, from which we are unable to conclude whether animacy or preceding element is in fact the significant predictor. These facts bring into question the reliability of such methods. Raw numbers are also usually employed in studies that consider referential distance and topic persistence. RD and TP scores are typically studied separately in more thorough statistical analyses (e.g. Schwenter & Silva 2010, Myhill 2005) and thus overlook the relationship between them and other factors in a given study.

### 3.1.3.2 Varbrul analyses

Variationist sociolinguistics has benefitted from the availability of the Varbrul program (current version: Goldvarb Lion [Sankoff, Tagliamonte & Smith 2012]) for nearly four
deca
des (Bayley 2013). This program provides variationist researchers a platform from
which to conduct inferential statistical analyses and offers a huge methodological
improvement over analyses that limit themselves to descriptive statistics. The main
advantage of this tool is that it enables the use of multiple logistic regression, which
models multiple linguistic and social independent variables that may influence the
selection of one linguistic variant over other variants. Two lines of evidence are provided
in the results given by the program: the directionality of the effect and the magnitude of
the effect (Torres Cacoullos 2011). The directionality of the effect is provided via factor
weights: above .50 favors, while below .50 disfavors. The magnitude of the effect is
reflected in the range, with a larger range reflecting a greater effect of the variable on the
variation. Changes in the magnitude of effects in diachronic studies can cause reranking
of the constraints, which is largely attributed to changes in grammar over time, as seen in
Torres Cacoullos’ (2007) study on estar +NDO constructions in Spanish. Many of the
studies mentioned in the previous sections make use of and provide results from Varbrul
for their quantitative analyses, including, for example, Torres Cacoullos (2007), Poplack,
Lealess & Dion (2013), Reig Alamillo (2009), Andrade (2010c), Schwenter & Silva

While Varbrul results are understood throughout the variationist community, the
use of the tool can result in analyses that are as problematic as those that use only token
counts. An inherent shortcoming of regression analyses, using Varbrul or other tools, is
that large quantities of data are necessary in order to adequately populate the cells during
regression. With few tokens for a given factor, it is the analyst’s job to determine
necessary exclusions or collapsing of factors that function similarly in order to produce
an analysis with data that does not suffer from distributional issues. The results provided by Andrade (2010c) are suggestive of this sort of distributional problem due to factors that have few or singleton tokens resulting in crossover effects and lower confidence outcomes. Other shortcomings that are specific to Varbrul are laid out in the following paragraphs.

Varbrul requires that the dependent variable be binary, with only two values allowed (Bayley 2013). In the case of Schwenter & Silva (2010), who compare three values for their dependent variable, the authors are forced to conduct three separate analyses, with each of the three variants of the dependent variable run against the other two. Varbrul is also equipped to conduct analyses with only categorical independent variables, which makes the study of gradient phenomena with this software difficult (e.g. RD and TP [Schwenter & Silva 2010], or the role of frequency [Andrade 2010c]). Furthermore, as Bayley (2013) and Johnson (2009) point out, Varbrul and its factor weights are not used outside of the field of sociolinguistics, a fact which makes difficult cross-field sharing of methods and results.57

Another shortcoming of Varbrul relates to the assumptions underlying the statistics: that is, all observations are assumed to be independent of one another. While this assumption makes sense for certain kinds of linguistic analyses, such as experimental work where observations and subjects are more controlled, the data used in sociolinguistic and variationist work requires large amounts of corpus data. A given analysis may contain numerous tokens from a single individual informant or text,

57 To address the issue of Varbrul as a one-field tool, Rbrul was developed to provide both greater functionality and more cross-disciplinary accessibility of reported results (Johnson 2009). Rbrul also shares the advantages that R has over Varbrul, which are outlined in §3.1.3.2 and §3.1.3.3.
alongside a single token from another informant. Without accounting for variation that occurs due to a given speaker’s (or author’s) usage patterns, it is possible that variation specific to a certain speaker is causing the effect rather than a broader sociological pattern. Due to this assumption, the effect of external (or social) variables is overestimated in the Varbrul program, producing a Type I error and an analysis that cannot be generalized beyond the population in the study (Johnson 2008, Johnson 2009, Tagliamonte & Baayen 2012). This issue is sometimes addressed by including speaker as its own factor group in the regression analysis. The result of this methodological choice is that the effect of other social variables is underestimated, since speakers will account for a much larger portion of the variation than any of the broader social factor groups (Johnson 2009).\(^{58}\) As an example, the social variables found to be significant in Reig Alamillo’s (2009) study of propositional object expression in Spanish are likely overestimated. These shortcomings are addressed in the following section.

### 3.1.3.3 Regression using R, and other tools

Many of the issues found in Varbrul are resolved by conducting the regression analysis using R. Not only does R have greater functionality (i.e. in the production of graphics and the types of tests and data it can handle), but it also offers variationist users results that are more readily shared across disciplines. That is, logistic regression in R produces results using the more ubiquitous measure of log-odds instead of factor weights (Johnson 2009). Furthermore, R allows the variationist to conduct linear regression with a continuous dependent variable, as well as logistic regression with both categorical and

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\(^{58}\) In corpus work drawing data from many speakers and documents, including a factor group of speaker in Varbrul is unheard of due to the large number of factors (speakers) that would be included. Furthermore, many of these speakers would constitute only a few tokens, amplifying distributional issues.
linear independent variables. In this way, R offers benefits that Varbrul lacks, which would allow, for example, Schwenter & Silva (2010) to better explore the relationship between RD and object expression in Portuguese. The analyses available in the R platform could also benefit Andrade (2010c) by offering him the means to consider verbal frequency as a continuous variable in his study of CC in EP.

Another advantage of variationist use of R over Varbrul is the availability of mixed effects models in R, which enable the researcher to account for external (‘random’) variables including speaker and lexical effects. As Johnson (2009:365) explains, a mixed effects model can “capture external effects [variation caused by speaker], but only when they are strong enough to rise above the inter-speaker variation”. In this way, mixed effects models can find patterns in the data while accounting for noise created by outlier speakers. Also useful to variationist work and available in R are random forests and conditional inference trees. These tools are argued to add value to a logistic regression analysis by providing orthogonal evidence about the relationship between the predictors (Tagliamonte & Baayen 2012). The random forest is useful when the analyst has a large number of predictors that are potentially collinear or when there are potential empty cells within the data set. Furthermore, R can produce a conditional inference tree based on the important predictors selected in the random forest in order to provide a visualization of how different factors and levels interact as part of the variable grammar. These tools in combination are ideal for studying linguistic variation, with the random forest providing the broadest information about which factors to include in the building of statistical models, the regression models showing the directionality of the effect for each variable, and the conditional inference tree offering a fine-grained analysis.
of the interactions between the predictors.

3.1.3.4 Statistical tools to be used in this dissertation

This dissertation will make use of R to conduct multiple logistic regression to determine the constraints on object clitic placement in EP and BP. With a focus on postverbal placement ((V) V=CL), I will follow Tagliamonte & Baayen’s (2012) argument for mixed methods and not only include a mixed effects regression model (cf. Johnson 2008, Johnson 2009) but also make use of the random forest tool to determine the order of significant independent predictors and the conditional inference tree to determine the extent to which placement patterns are similar or different in each environment. The conditional inference tree will also serve to provide a visualization of the interactions between the independent variables.

3.2 The dependent and independent variables

3.2.1 The dependent variable

This work on object clitic placement in Portuguese will be informed by the descriptions and prescriptions of the sources cited in the above sections. I include both simple and complex verbal constructions in environments that ‘require’ or show a preference for proclisis in EP. Since clitic placement in these contexts is debated in BP (compare: Thomas 1969, Thomas 1974, Perini 2002 vs. Cunha & Cintra 2002, Galves, Moraes & Ribeiro 2005), I will limit my study to complex verbal constructions in these proclisis contexts in BP. This section details the variables to be analyzed.

3.2.1.1 The dependent variable in European Portuguese

The dependent variable in the European Portuguese data involves object clitic placement
(preverbal or postverbal) in the presence of one of three proclisis triggers: *que*, *talvez*, and *não*. I include both simple and complex predicates, given that enclisis is the unmarked option for all predicates and proclisis is expected to result from the presence of a trigger word. All object forms, with the exception of *se* forms, are included. These *se* clitics can reflect reflexive, passive, and inherent meanings and are left for future study. Due to their anaphoric properties and differences in animacy from personal pronouns, third person direct object clitics receive a separate statistical with a variety of added independent predictors that will be studied for these forms only. Further information about the envelope of variation and exclusions is detailed in Chapter 4.

3.2.1.2 The dependent variable in Brazilian Portuguese

In the Brazilian Portuguese data, I focus on clitic placement in complex predicates following the same triggers as mentioned for EP: *que*, *talvez*, and *não*. The placement options that are analyzed include triggered proclisis (CL=V V), untriggered proclisis (V CL=V), and enclisis (V V=CL). Since the unmarked placement of clitic objects in BP is preverbal (untriggered proclisis) without the presence of a trigger, it is expected that enclisis will not be found in simple predicates following the trigger words with the possible exception of very formal registers; for this reason, simple predicates in BP are excluded completely from the present work. All personal object clitics in these trigger contexts are coded, but third person accusative clitics are excluded from the present study since these have been largely replaced with tonic and null forms (cf. Schwenter 2014).
3.2.2 The independent variables

3.2.2.1 Linguistic variables and hypotheses

3.2.2.1.1 Presence of subject

As reported in Chapter 2, Davies (1997) finds that phrases with null subjects show greater CC (preverbal placement) in Portuguese. For the present study, certain considerations must be made with respect to this factor. In particular, many cases of relativizing que ‘that’ disallow an explicit subject within the clause. Tokens of the sort found in (42) below need to be treated differently than more prototypical tokens involving the complementizer in (43) when coding for subject expression.

(42) Essa é a mulher que (te) viu(-te) ontem.

‘That’s the woman that saw you yesterday.

(43) Acho que (te) viu(-te) ontem.

‘I believe that [s/he] saw you yesterday.

Accordingly, example (42) would be coded as containing an explicit subject, reflecting the function of que and the antecedent of the relative clause, while (43) would be coded as having a null subject. Furthermore, important differences in rates of subject expression exist between different dialects of Spanish and Portuguese (cf. Sainz-Maza Lecanda 2013). In essence, BP and certain dialects of Spanish have high rates of subject expression, while EP has a much lower rate. Thus, if an expressed subject affects the variation in object clitic placement in all three varieties, then I would expect to find some
important differences in rates of preverbal and postverbal placement caused by this factor.

### 3.2.2.1.2 Type of clitic

Separate analyses are done for third person accusative clitics and other clitics in EP. The BP data receive a single analysis that includes all of the extracted personal pronoun clitics. The analyses (excluding third accusative forms) contain accusative first and second person clitics, all dative forms, and reflexive/inherent forms. Although Costa, Fiéis & Lobo (2015:13) state that “clitic placement does not vary according to the type of clitic” in EP, other authors have found differences between accusative, dative, and reflexive forms with respect to the placement patterns. Accordingly, the various types of clitics receive separate coding to determine the effects within preverbal trigger environments following Davies’ (1995) and Andrade’s (2010) results that suggest that reflexive/inherent and accusative clitics show a strong tendency toward the maintenance of enclisis. Dative forms, in contrast, are more typically found in preverbal position (cf. Davies 1995, Andrade 2010; see also: Fiéis, Madeira & Xavier 2013 regarding greater acceptability of CC with datives than accusatives). Meanwhile, anaphoric accusative clitics are expected to show greater sensitivity to discourse factors such as animacy, distance to prior mention, and topic persistence (cf. Schwenter & Torres Cacoulos 2014a, Schwenter & Torres Cacoulos 2014b), which are expected to play a role in the variation in placement.

The third person reflexive pronoun *se* are excluded from study here, since this pronoun can carry an inherent, reflexive, passive, or impersonal interpretation and could thus result in a different placement due to such inherent meaning differences. The study
of this clitic pronoun is left for future study through independent analyses.

3.2.2.1.3 Trigger words
The studies presented in Chapters 4 and 5 include three trigger words: que ‘that’, talvez ‘perhaps’, and não ‘not’ (sentential negation). The decision to include clitics in the presence of these triggers is based on the lack of research that accounts for trigger words. These triggers are different in ways that could cause variation in clitic placement between the three environments. First, que introduces subordinate clauses, while talvez and não can introduce a main clause. Second, while que follows a the generalizable syntactic pattern whereby certain conjunctions and interrogative words trigger proclisis (quando ‘when’, onde ‘where’, etc.), talvez, and, to a lesser degree, não, are idiosyncratic and not easily classified into a single group of triggers, a fact which could cause acquisition and processing differences. Next, talvez is normatively (though variably) followed by verbs in the subjunctive mood; mood choice following que and não, on the other hand, is entirely context-dependent, although it should be noted that subordinate clauses such as those introduced by que, as well as negation contexts, have been shown to trigger a host of conservative patterns (subordinate clauses: Poplack 2011, Poplack, Lealess & Dion 2013; negation: Torres Cacoullos 2007, Poplack & Dion 2009, among others). Finally, these triggers reflect what Vigário & Frota (1998) have labeled phonologically strong function words falling into two classes—Type I (talvez, não) and Type II (que)—as explained in §2.4.2.1. For these reasons, these triggers will be studied in both the EP and the BP analyses of variable clitic object placement patterns. While I expect EP speakers to be more sensitive to trigger words in general than BP speakers because of variety-internal constraints (cf. Vigário & Frota 1998), I also expect there to be a greater difference
between rates of postverbal placement by trigger word in EP than BP because of the phonological status presented by Vigário & Frota (1998) for EP. Moreover, the rate of subjunctive mood use in the presence of each trigger word will differ, and placement patterns are expected to be affected by this.

3.2.2.1.4 Topicality

Investigation into the role of topicality in clitic placement is most relevant for third person accusative pronouns, since first and second forms can often be used in deictic or indexical ways in discourse with no anaphoric or cataphoric reference. Thus the study of referential distance (RD) and topic persistence (TP) measures are limited in the present study to third accusative forms only, which means topicality is considered for only EP third person direct objects. RD is coded as the number of clauses, counted as number of verbs, back to the prior explicit or null reference, and TP is coded as the number of times the referent appears as an explicit or null form in the following available text, around five clauses following the extracted token. RD and TP are thus coded numerically as continuous variables to potentially receive later binning in the analysis. Furthermore, RD and TP measures have been expanded by Shain (2009), who examines topicality as it relates to differential object marking in Paraguayan Guaraní. Shain (2009) suggests that RD and TP are problematic comparative measures, since a) as backward-looking and forward-looking measures, they function within a mutually exclusive set of data, b) their relationship with topicality differs by nature, with RD inversely correlated and TP positively correlated with topicality, and c) the two measures count different things, given that TP counts number of repeat mentions and RD counts number of intervening clauses to the referent (cf. Shain 2009:74-5). To remedy these concerns, Shain develops measures
of total topicality. Accordingly, he counts both traditional backward-looking RD and forward-looking TP measures, along with “Forward Referential Distance” (F-RD) and “Backward Topic Persistence” (B-TP). These added measures allow the researcher to look at the same kinds of data in both directions: RD counts the clauses back to the prior mention, and F-RD counts the clauses forward to the next mention; similarly, TP counts the number of mentions in the following discourse, and B-TP counts the number of mentions of the referent in prior discourse. Using these added measurements, Shain proposes two possible measures of total topicality: one that depends on the sum of the two RD measurements, and one that adds together the two TP counts. With these innovations in mind, I code my data for both RD and TP, as well as F-RD and B-TP, with the goal of incorporating operationalized and comparable assessments of the topicality of the third person accusative objects with reference to their placement.

Furthermore, animacy and relative animacy will be coded for these same 3rd accusative forms. The results presented for Spanish by Myhill (1988), Mexican Spanish by Schwenter & Torres Cacoullos (2014a, 2014b), and Asturian Spanish by Barnes, González López & Schwenter (2014) suggest that 3rd person accusative animate clitics have a higher rate of enclisis than inanimate 3rd person clitics. Given the parallels between the clitic object placement patterns in Asturian Spanish and EP, as well as between Spanish and Portuguese at large, it is expected that an effect of animacy will also be found in the EP data.

### 3.2.2.1.5 Person/number of the verb

Related to the questions of topicality and animacy, the person and number of the verb will also be examined in my work. Given that Myhill (1988) finds that proclisis in
Spanish is favored when the clitic equals or outranks the subject in animacy, I predict that first and second person subjects will show greater postverbal clitic placement in Portuguese. This is because clitic objects will necessarily have equal or lower animacy values than the first person subjects and often also the second person subjects. This will be further explored in both EP and BP.

3.2.2.1.6 Verb tense and mood
I also code for verb tense and mood in all three varieties. Although tense has not been shown to affect clitic form, there may be an interaction between verb form, tense, and frequency. Verbal mood—the subjunctive mood, in particular—in subordinate clauses has been suggested to maintain conservative grammatical patterns and will be closely considered in this dissertation. By coding for verbal mood, the following questions are addressed: Are clauses with verbs in the subjunctive mood inherently conservative, requiring normative behavior, or does mood interact with other variables? Does this normative behavior look different in EP—where preverbal placement in the presence of trigger words is considered a remnant of old grammatical patterns—when compared to BP—where preverbal placement is considered more innovative in complex predicates? Or, more generally speaking, what is the effect, if any, of mood on BP placement patterns?

3.2.2.1.7 Construction type (governing verb)
Construction type is also considered for verbal sequences, with a division made between phrases that contain a single verb and those with aspe ctual, modal, and other auxiliary-like governing verbs. In the case of multiple verbs, the governing verb are coded, following Myhill (1988), Davies (1995, 1997), and Schwenter & Torres Cacoullos (2010,
2014a, 2014b), who argue that the class of the governing verb or simply the governing verb itself affects the variable rates of preverbal clitic object placement. In EP and BP, it is hypothesized that placement following proclisis triggers is determined by the construction type, but given that proclisis is an unproductive remnant of earlier phonological and syntactic restrictions, the patterns in EP and BP are expected to differ. Accordingly, I predict that more grammaticalized constructions in EP, such as ir futures and estar progressives, will show a greater tendency to maintain the remnant construction (proclisis), while less grammaticalized constructions are more likely to show analogical enclitic placement. In BP, the additional proclisis option of clitic placement between the two verbs is not expected to be affected by verbal frequency or grammaticalization. Finally, I expect that construction type plays a role only in as much as a factor that distinguishes complex predicates and simple predicates, and that verbal frequency will be a better predictor of constructional effects in both varieties.

3.2.2.1.8 Verbal frequency
Given Davies’ (1997) and Andrade’s (2010c) findings that show that high frequency governing verbs show more CC (typically preverbal placement) in EP, I also test for frequency effects in the two varieties of Portuguese included in this work. Frequency is coded as a continuous measure in this study using available token frequency data from the Corpus do Português and is included in the statistical models as a fixed effect. I consider verbal frequency for both simple and complex predicates in the EP data, and the effect of frequency is expected to be greater for complex predicates than for simple ones due to the added pull toward enclisis from the nonfinite host verb. Similarly, BP is expected to show higher rates of triggered proclisis prior to a complex predicate with
higher verbal frequency, since high frequency constructions maintain more conservative or idiosyncratic constructions (cf. Bybee 2010).

3.2.2.1.9 Syntactic priming effects
Another factor that is investigated in Chapters 4 and 5 is syntactic or structural priming/persistence effects. As Torres Cacoullos (2013:19) explains, priming effects reflect a tendency on the part of a speaker to repeat syntactic patterns from earlier discourse. She shows that the use of the progressive *estar*+gerund ‘to be Xing’ construction in the 13-17th centuries in Spanish is primed by its use in a previous clause. Structural priming effects have also been found to play a role in modern usage of variable NP agreement and subject-verb agreement in BP (Scherre & Naro 1991, Scherre & Naro 1992, Guy 1981) and in subject expression in Basque Spanish (Sainz-Maza Lecanda 2013). Gries (2005) and Szmrecsanyi (2005) have added to the discussions of syntactic priming effects in English with respect to verb+particle sequences and dative alternation, while Schwenter (2013b) has added to this body of work with a focus on the variation between -*ra* and -*se* past subjunctive forms in Spanish. With respect to priming effects in clitic placement, Barnes, González López & Schwenter (2014) find that prior enclitics prime enclitics, and prior proclitics prime proclitics in Asturian Spanish. However, the effect of priming is not equally strong for both placements: a prior enclitic has a stronger priming effect on the target clitic than does a prior proclitic, and this asymmetry holds true for both direct and indirect object pronouns.

To determine whether priming affects clitic placement, I consider different effects in each variety. Since the unmarked clitic placement is postverbal in EP, I code for whether an enclitic is available in a nearby prior clause in order to determine whether a
prior postverbal clitic results in higher rates of postverbal placement in the contexts in question. For BP, I will code for clitic placement in prior clauses as either preverbal or postverbal to determine what role, if any, prior clause clitic placement has on placement within the contexts under consideration. Additionally, following Gries (2005) and Szmrecsanyi (2005), similarities in the target and prime will be considered, including similarities in clitic form and verb lemma. Thus, the following will be coded in my data:

(44)  a. the number of clauses back to a prior clitic, when present  
    b. the placement of the prior clitic (proclisis or enclisis), when present  
    c. whether the prime is same clitic form with respect to person/number, as well as referent  

It is predicted that prior enclitics will prime target enclitics in both varieties, much like Barnes, González López & Schwenter (2014) show for Asturian Spanish. In the case of BP, this priming effect is expected because typically older and less productive morphosyntactic constructions (like enclisis) are the ones that are most susceptible to priming behaviors. In EP, on the hand, the priming effect is expected due to analogical leveling and minimization of processing: enclisis, which is found throughout the system, is expected to prime more enclisis in contexts that would otherwise be expected to result in normative proclisis.

3.2.2.2 Social variables  
    3.2.2.2.1 Geographic variation
I will consider broad geographic differences in pronominal object clitic placement
patterns. Specifically, I will consider EP and BP patterns individually, taking into account inherent differences between the varieties that may factor into object clitic placement. Because subject expression rates differ considerably between EP on the one hand and BP on the other, I code for subject expression for individual tokens. Similarly, object expression is obviously crucial to object clitic placement patterns and will therefore require careful consideration. In essence, third person accusative clitics with inanimate and indefinite referents in EP and especially BP are often left unexpressed as null forms, so fewer tokens of these third accusative objects will be available than other object clitic forms. Moreover, the tokens that are available for these forms in EP will likely share a number of features that could affect placement (animacy, definiteness, specificity), which could result in less variation in placement than found with other accusative and dative forms. The added fact the BP strongly prefers usage of tonic forms over clitics for third person accusative objects will necessitate certain methodological choices, such as the exclusion of these third accusative objects in BP.

3.2.2.2 Register
Register effects have been found across both EP and Spanish data, and I further explore the role of register in both EP and BP. Written data is especially important in the study of BP in order to find a wider variety of clitic pronouns and to determine what placements are stylistically predominant across registers. I expect to find more normative placement patterns in more formal (written) registers, resulting in greater normative proclisis in both EP and BP following the proclisis triggers under examination (cf. Andrade 2010c).

Register effects have also been shown to interact with other variables. For example, Gries (2005:382) found that register interacts with priming effects in
verb+particle constructions in English, such that priming is more common in spoken language use except in the case that the verb lemma is identical between target and prime. Through the exploration of interactions in the data, I will also examine the relationship between register and other discourse-organizational factors.

**3.2.2.3 Summary**

To summarize, certain broad social factors have been correlated to the variation found in pronominal phenomena in Spanish and Portuguese. While prior studies do not offer a clear and detailed view of exactly which factors affect the pronominal questions, some generalizations can be made. First and foremost, register is key to clitic object placement patterns, though whether this is due to the types of discourse organization in the data or the educational level of participants from whom data has been collected in each register remains unclear. Broad geographic differences due to divergent norms are also key to several pronominal issues. My study of clitic object placement aims to contribute to these discussions by providing empirical support for both the linguistic and the social factors constraining the variation. Although this study focuses on broad rather than fine-grained trends in social patterning and will not compare all social factors across the geographically diverse data, my primary goal is to discern the interactions between these two macro social categories and other linguistic forces that influence the choices made by language users. Finally, this work will provide further evidence in the debate about whether there is indeed a change in progress in BP toward generalized preverbal (V CL=V) placement and in EP toward generalized postverbal placement ((V) V=CL).
CHAPTER 4. VARIABLE CLITIC PLACEMENT IN EP

In this chapter, the results of the data analyses for European Portuguese personal pronouns and third person anaphoric direct objects are presented, including general distributions of the data, the statistical analyses, and the effects of verbal frequency.

4.1 Personal object pronoun data

The data included in this section consist of all object pronouns excluding 3rd person accusative forms o, a, os, as, -lo, -la, -los, -las, which are discussed separately in section 4.4, and 3rd person reflexive se, which has been excluded from the analysis for reasons discussed in Chapter 3. The tokens were extracted following the trigger words que, talvez, and não, as long as the clitics fell within the same clause as the trigger. The tokens include those with up to three words placed between the trigger and either the proclitic or verb; this coding decision was made due to extremely low or nonexistent token availability beyond this distance threshold, and in some cases of trigger talvez, even this distance was beyond the scope of the adverb and was necessarily excluded. As discussed in Chapter 3, tokens were coded for the following fixed effects: the trigger itself (que, talvez, or não), subject expression (present or absent), lexical verb form with which the clitic belongs semantically (finite or nonfinite), tense (present, past, or future, coded by function rather than form), mood (indicative or subjunctive), person and number of the verb (1s, 1p, 2s, 2p, 3s, or 3p), pronoun (me, te, lhe, lhes, nos), pronoun type (direct
object, indirect object, or reflexive pronoun), construction type (simple, modal, “movement”, or perfect/progressive)\textsuperscript{59}, register or mode (interview, fiction, news, or academic writing), verbal frequency as defined within the corpus by verb lemma, priming effects (number of clauses back to prior clitic and whether prior clitic was pre- or postverbal; coded for the não trigger only and taken as representative of the set), and year of the document (ranging from 1893 to 2004). Random effects of document and verb were also coded.

Given that normative proclitic placement is the predominant pattern in the corpus, a number randomizer\textsuperscript{60} was used to avoid coding hundreds more proclitic forms. In essence, the corpus contains approximately 15 to 20 times more proclitic personal pronoun tokens than enclitic ones in these triggered contexts in EP. In cases where over 100 tokens of proclitic placement were found for a given clitic pronoun in the presence of a given trigger word, proclitic tokens were extracted at roughly a 3 to 1 ratio with respect to the number of enclitic tokens available. The number randomizer was used to determine which proclitic tokens would be extracted and coded, such that the number of available corpus tokens was entered into a randomizer that was set to produce a limited set of the possible numbers. For example, if 600 results were available for proclitic tokens within a certain context, with only a corresponding 60 tokens for enclisis in the same context, the number randomizer was set to select a random sample of 180 of the possible 600 proclisis tokens. The 180 numbers produced by the randomizer reflects a random assortment with values between 1 and 600; this random assortment of tokens was then extracted and

\textsuperscript{59} Perfects and progressives were originally coded separately, but low token counts for progressives made collapsing necessary. Rates of enclitic placement for perfects and progressives were roughly equal, showing less than 2\% difference in enclitic placement rates.

\textsuperscript{60} \url{http://www.randomizer.org/form.htm}
Exclusions were made in cases where tokens could not be coded in a straightforward way or in cases that fell outside of the envelope of variation. These exclusions were made according to the following criteria:

(45) Exclusions

a. The trigger was unclear, involving more than one adverb, conjunction, or negation word that normatively induces proclitic placement.\(^\text{61}\]
   i. Eu, que já não me interessa viajar.

b. Two clitic pronouns occurred in a sequence, resulting in a clitic cluster.
   ii. À porta de casa, repeli sem piedade um gato meigo que pretendia roçar-se-me nas calças.

c. The pronoun was placed prior to a negation word, common as a stylistic device in literary registers (cf. Cunha & Cintra 2002:314).
   iii. Como que para me tranquilisares, para me dizeres que o fogo te não abrasaria. Vi-te logo, minha amiga.

d. There was no clear pro- or enclitic placement, due to clitic doubling or possibly speech error:
   i. A mãe da Laurinda gritava: “Ai minha filha que te desgraças-te”. Mas a filha disse logo para cortar a conversa.

e. The associated verb in question was an infinitival form and not part of a

\(^{61}\) Although variation is found in these contexts, they were excluded except in cases when the closest trigger to the clitic was the one being coded for. So for the example in (45a), this token was excluded from the tokens coded for trigger que but could have been selected in the number randomizer for the trigger não without exclusion.
compound, restructuring context that includes a modal or similar verb type.

These exclusions include inflected or uninflected infinitives:

i. Não tinha mais nada a fazer do que dar-lhe a importância de perguntar.

f. There were intervening adverbs between the verbs in multi-verb sequences, since these resulted in categorical enclisis:

i. E nem isso foi necessário, pois não conseguiu sequer despertar-me a atenção.

Although some of these exclusions have previously been categorized as relics of child grammar during the acquisition process (Costa, Fiéis & Lobo 2015), all were found in the corpus as spontaneous adult productions. However, due to the difficulties that they present with respect to coding and analysis, they have been excluded from the present study.

### 4.1.1 Results for all forms except 3rd person DOs

The distribution of data by placement of the clitic and by trigger word is presented below in Tables 1 and 2.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>1190</td>
<td>77%</td>
</tr>
<tr>
<td>Enclitic</td>
<td>364</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1554</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 1. Distribution of EP data (excluding 3rd DO forms) following que, não, and talvez.
Table 2. Distribution of data for EP clitics (excluding 3rd DO forms) by trigger word.

<table>
<thead>
<tr>
<th></th>
<th>que</th>
<th>talvez</th>
<th>não</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>605/790</td>
<td>96/110</td>
<td>489/654</td>
</tr>
<tr>
<td>Enclitic</td>
<td>185/790 (23%)</td>
<td>14/110 (13%)</td>
<td>165/654 (25%)</td>
</tr>
<tr>
<td>Total</td>
<td>790/1554 (51%)</td>
<td>110/1554 (7%)</td>
<td>654/1554 (42%)</td>
</tr>
</tbody>
</table>

As can be seen in the above tables, postverbal clitics constitute a much smaller percentage of the data than preverbal clitics, and the total percentages are affected by the decision to employ a number randomizer to limit the number of proclitics included. Moreover, the *que* and *não* triggers are much more frequent than *talvez*, producing a sizable difference in the number of total tokens extracted with respect to the trigger words.

The distributions by register show considerable differences in non-normative placement patterns based on the level of formality, style, and attention paid to speech.

Table 3. Raw frequencies of proclitic and enclitic placement by type of document in EP. Chi-square results indicate that the rate of enclisis does not significantly differ between oral interviews and fiction (Interview x Fiction: $\chi^2 = 1.52$, df = 1, $p > 0.05$), while the rate of enclitic placement differs significantly between the other two document pairings: Interview x News/Acad: $\chi^2 = 16.9$, df = 1, $p < 0.001$; Fiction x News/Acad: $\chi^2 = 14.8$, df = 1, $p < 0.001$.

<table>
<thead>
<tr>
<th></th>
<th>Oral Interviews</th>
<th>Fiction</th>
<th>News/Academic Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>163/228</td>
<td>821/1089</td>
<td>206/237</td>
</tr>
<tr>
<td>Enclitic</td>
<td>65/228 (29%)</td>
<td>268/1089 (25%)</td>
<td>31/237 (13%)</td>
</tr>
<tr>
<td>Total N</td>
<td>228/1554 (15%)</td>
<td>1089/1554 (70%)</td>
<td>237/1554 (15%)</td>
</tr>
</tbody>
</table>

The above results suggest that non-normative postverbal or enclitic placement is more prevalent among lower registers than in higher registers, with the most formal news and
academic writing showing the most normative behavior following proclisis triggers. To tease apart the differences in spoken and written language, cases of quoted language or conversations in writing—such as fictional dialogues or quotes from an interviewed expert or witness in news reports—were coded separately from other cases of written language. The data show that quoted speech in writing behaves in a different way, somewhere between formal written language and spoken language. The rate of enclisis following a trigger in quoted speech is around 22%, and this rate is consistent across both fictional documents (51/224 cases) and news sources (2/9 cases). Interestingly, in neither case is the rate of enclisis in quoted speech significantly different from the rate of enclisis in the same written medium without quoted speech (news x quoted in news: $\chi^2=0.668$, df=1, p > 0.05; fiction x quoted in fiction: $\chi^2=0.516$, df=1, p > 0.05). In the news sources, the difference in rate of enclisis may be an effect of conscious or unconscious editing on the part of the writer, or heightened self-awareness on the part of the speaker with greater attention paid to ‘correctness’ of speech. In the case of quoted speech in fiction, the expectation is that this style would most closely reflect that found in oral language.

However, an even lower rate of non-normative enclisis is found in quoted speech when compared to more descriptive writing. Rather than achieving the authenticity of speech, the authors manage to approximate it imperfectly, suggesting that the placement of the object clitic lies below the level of consciousness.

The general trend illustrated in Table 3 is expected because speakers tend to follow more normative patterns in more formal—and especially written—contexts. However, my results diverge from those reported by Andrade (2010c), to the extent that our results may be compared. In essence, Andrade (2010c) shows that clitic climbing in
complex predicates—whether to postverbal or preverbal position in both triggered and untriggered contexts—is more common in informal spoken registers, while my results show that triggered contexts in informal registers are less likely to show preverbal clitic placement in simple and complex predicates than other contexts. Since Andrade’s (2010c) results include both cases of clitic climbing resulting in enclisis to an auxiliary or modal form and cases resulting in proclisis, and these cases are not separated by the presence or absence of a trigger word, our results are not entirely comparable. However, our results jointly suggest two different patterns: 1) clitic climbing (resulting in proclisis or enclisis) is more common in informal, spoken registers (Andrade 2010c), and 2) non-normative enclisis (the total absence of climbing) in triggered contexts is more common in informal registers (Table 3).

4.2 Statistical analyses

The statistical analysis presented in this section is comprised of three parts: a random forest, a multivariate mixed-effects regression analysis, and a conditional inference tree. In addition to these measures, tables with raw percentages are also included to illustrate certain trends in the data, some statistically significant, that the complexity of the regression analysis involving many variables could not handle without producing a non-converging result due to poor token distributions.

The random forest, which is presented below in Figure 2, is a statistic done in R that allows the researcher to consider all independent variables and accordingly to determine which of these variables independently explains the most variation. The benefit of using a random forest prior to running the regression analysis is that it provides
evidence for which of possible collinear or overlapping variables more closely correlates with the dependent variable and therefore should be included in the regression models. Figure 2 demonstrates this kind of comparison in the top two factors listed: construction type is subdivided into modal, movement, perfect/progressive, and simple verb constructions, while verb form is a simplified measure that refers to the finiteness of the verb with which the clitic associates (i.e. either a finite or infinitive form). The higher ranking of construction type over verb form indicates that this categorization is more closely correlated with clitic placement, and thus only the more detailed construction type factor and not the verb form factor should be included in the building of models through logistic regression. Similarly, the frequency of the conjugated (auxiliary) verb is considerably more influential to clitic placement than the frequency of the lexical verb, which can be finite or not. That is, the frequency of the single finite verb in simple constructions and the nonfinite form in constructions that contain auxiliaries or modal verbs is less correlated with non-normative enclisis than is the frequency of the finite verb across construction types. One final case in which the random forest helps in the selection of factors to include in the regression analysis involves the mode and document type factors. Mode refers to written and oral modes, while document type deals with more specific kinds of those modes, including oral interviews, news, literary sources, and academic articles. The ranking within the random forest suggests that the more fine-grained approach is more appropriate for further statistical analysis, given that document type is ranked higher and is thus independently more closely correlated with non-normative enclisis.
Mixed effects logistic regression using the `glmer` function in the languageR package in R was executed, and significant predictors were selected by a forward stepwise selection procedure. In the case of factors that overlap in criteria, the better fit factor was selected from the results of the random forest above. Models producing an error related to non-convergence were omitted from the analysis due to the untrustworthy nature of the results in such models. Random effects of verb and document were added into the models, and model comparison using ANOVA was then conducted for the selection of the best model. The tables that follow show the significant predictors and the directionality of the effect for each level.

As mentioned in the previous section, register has an important effect on the likelihood of encountering non-normative enclitic placement. This is confirmed in the
mixed effects model, which shows that oral interviews have a favoring effect on non-normative placement, and extremely formal registers such as journalistic and academic articles have a strong disfavoring effect. Notably, fiction does not show a significant effect largely due to the fact that the data in this category make up a large percentage of the data included in the analysis.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-0.2360</td>
<td>0.2020</td>
<td>-1.168</td>
<td>0.2427</td>
<td></td>
</tr>
<tr>
<td>fiction</td>
<td>0.0378</td>
<td>0.2060</td>
<td>0.183</td>
<td>not significant</td>
<td>268/1089 (25%)</td>
</tr>
<tr>
<td>oral interview</td>
<td>1.3074</td>
<td>0.2315</td>
<td>5.648</td>
<td>&lt; 0.001 ***</td>
<td>65/228 (29%)</td>
</tr>
<tr>
<td>news &amp; academic</td>
<td>-1.3450</td>
<td>0.2820</td>
<td>-4.769</td>
<td>&lt; 0.001 ***</td>
<td>31/237 (13%)</td>
</tr>
</tbody>
</table>

Table 4. Regression results for enclisis in EP by type of document. Oral interviews show a favoring relationship with non-normative enclitic placement (estimate > 0, with a low p-value), while the highest registers favor normative proclisis in the presence of a trigger. For this variable, sum contrasts were used to compare the estimates for each level with the average for the factor as a whole.

Trigger word was not considered in the statistical analysis due to the fact that the distributions of proclisis and enclisis for two of the three (que and não) were created by decisions made during the token extraction process. However, the low rate of non-normative enclisis with talvez is notable, in that this trigger is inherently quite different from the other two. Specifically, verbs following talvez normatively select subjunctive mood, whereas não and que may be followed by either indicative or subjunctive mood based on contextual factors. Although mood was not selected in the model comparison as a significant predictor of the variation, likely due to poor distributions across the data, a clear pattern emerges upon close inspection of the data. Table 5 below shows that the use
of subjunctive with all triggers accompanies more normative placement. Dividing out simple and complex verb constructions by verbal mood of the conjugated form, Table 6 illustrates that simple finite verbs are matched with very low rates of non-normative enclisis with verbs in the indicative mood; and in the presence of subjunctive mood, that low rate drops to no cases at all. Meanwhile, complex verbal constructions, involving a finite verb in the subjunctive mood followed by a nonfinite form that takes a clitic, allow for the maintenance of very high rates of non-normative enclisis. In short, there is no statistically significant difference in enclisis usage by the mood of the finite verb form in these complex multi-verb constructions, whereas mood plays a significant role in simple verb constructions with an apparent requirement for categorical normative behavior in the presence of the subjunctive mood. Certain kinds of embedded clauses have been shown to resist change and maintain conservative constructions (cf. Bybee 2001, Poplack 2011, Poplack, Lealess & Dion 2013), a fact that seems to have a bearing on clitic placement in EP. In fact, historical accounts suggest that certain clitic patterns in Romance languages are only found in the presence of the indicative mood. For example, Goodenkauf (2014) reports that interpolation between clitic and verbal host in Old Spanish only occurs in embedded *indicative* phrases. The similarity between the lack of interpolation in Old Spanish and the lack of non-normative enclisis in contemporary EP in the presence of subjunctive mood is representative of the conservative nature of embedded subjunctive clauses.
Interestingly, Barrie’s (2000) argument that there should be no effect of verbal mood on clitic placement because subjunctive can only be found in the presence of the proclisis triggers is strongly challenged by the results presented in the two tables above. My results provide evidence that verbal mood does, in fact, significantly affect clitic placement. The fact that mood does not emerge in the regression analysis is likely due to the strong interaction between mood and finiteness shown in Table 6 above.

Interestingly, subject expression did not emerge as a significant predictor of the variation in clitic placement. This offers evidence against Vigário & Frota’s (1998) prediction that the presence of explicit subjects results in non-normative placement in contexts that would otherwise have proclisis due to the non-adjacency of the trigger and clitic. In essence, the competing syntactic and prosodic restrictions alone cannot
adequately explain the variation found in this variety. Although Vigário & Frota’s (1998) prediction is borne out in Davies’ (1997) EP data that looks at clitic climbing without accounting for the presence of proclisis triggers, the statistical methods of the present study account for the variation in these particular contexts in a more systematic way.\textsuperscript{62}

Although subject expression is not strongly correlated with the variation in placement, the person and number of the verb is. Table 7 below shows the results with respect to person and number, with first person favoring non-normative enclisis when compared to the other persons.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-0.2360</td>
<td>0.2020</td>
<td>-1.168</td>
<td>0.2427</td>
<td></td>
</tr>
<tr>
<td>1 sg-pl</td>
<td>0.6097</td>
<td>0.1226</td>
<td>4.973</td>
<td>&lt; 0.001 ***</td>
<td>183/411 (45%)</td>
</tr>
<tr>
<td>2 sg-pl &amp; 3 sg-pl</td>
<td>-0.6097</td>
<td>0.2216</td>
<td>-4.973</td>
<td>&lt; 0.001 ***</td>
<td>181/1143 (16%)</td>
</tr>
</tbody>
</table>

Table 7. Regression results for enclisis of EP personal pronouns by person and number. First person forms are distinct from second and third person forms in their high rates of enclisis following a trigger word.

<table>
<thead>
<tr>
<th></th>
<th>1sg</th>
<th>1pl</th>
<th>2sg</th>
<th>2p</th>
<th>3sg</th>
<th>3pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>193</td>
<td>35</td>
<td>109</td>
<td>7</td>
<td>183</td>
<td>663</td>
</tr>
<tr>
<td>Enclitic</td>
<td>162 (46%)</td>
<td>21 (38%)</td>
<td>26 (19%)</td>
<td>1 (13%)</td>
<td>31 (14%)</td>
<td>123 (16%)</td>
</tr>
<tr>
<td>Total</td>
<td>355</td>
<td>56</td>
<td>135</td>
<td>8</td>
<td>214</td>
<td>786</td>
</tr>
</tbody>
</table>

Table 8. Raw distributions of clitic placement by subject person and number. First person forms are distinct from second and third person forms in their high rates of enclisis following a trigger word.

\textsuperscript{62} It should be mentioned, however, that the presence of adverbs intervening between verbs in a sequence does appear to influence clitic placement in triggered contexts, resulting in categorical enclisis. This is likely due to two patterns: 1) the general trend for enclisis in complex verbal constructions; and 2) speaker ‘derailment’ from the conservative pattern ‘required’ by the context, due to the added element (cf. Bybee 2001). These tokens were excluded as described in (45f).
Similarly, the object’s form also emerges as a significant predictor of the variation.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-0.2360</td>
<td>0.2020</td>
<td>-1.168</td>
<td>0.2427</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>-0.3726</td>
<td>0.1180</td>
<td>-3.159</td>
<td>&lt; 0.01 **</td>
<td>204/998 (20%)</td>
</tr>
<tr>
<td>me</td>
<td>0.3726</td>
<td>0.1180</td>
<td>3.159</td>
<td>&lt; 0.01 **</td>
<td>160/556 (29%)</td>
</tr>
</tbody>
</table>

Table 9. Regression results for enclisis in EP by object pronoun form. First person singular objects received a treatment separate from other forms, which were collapsed into a single category due to distributional concerns and similar placement patterns.

Diverging from other forms, first person singular clitic objects favor enclisis in the presence of a proclisis trigger. The combined results shown in Tables 7, 8, and 9 for subject and object pronoun forms as related to clitic placement display similarities to Myhill’s (1988) analysis of relative animacy and topicality of the subject as compared to the clitic object as a contributing factor to clitic climbing in Spanish. According to Myhill, when the clitic is higher in animacy than the subject within the animacy hierarchy (see example (38) in Chapter 2), clitic climbing (proclisis) is favored in Spanish; more enclisis would be expected when the clitic is lower than the subject in this hierarchy.
Table 10. Percent enclisis in EP by subject and object form. Gray highlights indicate higher than average rates of enclisis at the intersection between subject and object.

<table>
<thead>
<tr>
<th>Subject</th>
<th>1sg</th>
<th>1pl</th>
<th>2sg</th>
<th>2p</th>
<th>3sg</th>
<th>3pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>me</td>
<td>48%</td>
<td>0%</td>
<td>25%</td>
<td>13%</td>
<td>21%</td>
<td>10%</td>
</tr>
<tr>
<td>nos</td>
<td>0%</td>
<td>33%</td>
<td>33%</td>
<td>0%</td>
<td>10%</td>
<td>19%</td>
</tr>
<tr>
<td>te</td>
<td>46%</td>
<td>0%</td>
<td>13%</td>
<td>0%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>lhe</td>
<td>40%</td>
<td>70%</td>
<td>14%</td>
<td>0%</td>
<td>14%</td>
<td>17%</td>
</tr>
<tr>
<td>lhes</td>
<td>67%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>15%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Myhill’s (1988) finding for Spanish would correspond in EP to low rates of enclisis with clitics *me* and *nos* in the presence of second and third person subjects and *te* in the presence of third person subjects. The highest rates would be expected with first and second person subjects and third person objects. As can be seen in Table 10 above, high rates of enclisis are indeed found with first person subjects and second and third person objects (*te, lhe, and lhes*), and low rates are found with *me, nos, and te* in the presence of third person subjects. In general, then, a relative animacy effect according to Myhill’s guidelines is found in EP, with some notable exceptions. That is, the predictions are not entirely borne out in Table 10, given the unexpected finding with respect to the high rates of enclisis found with first person objects (*me and nos*) in the presence of a second person subject. This seems to follow Myhill’s unusual assertion that second person ranks higher on the animacy scale than does first person (cf. (38)).

Moreover, the high rates of enclisis in the presence of first person subjects and first person objects, as well as the low

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63 According to Langacker’s (1991:306-7) proposed universal empathy hierarchy, we find the following ordering that parallels the typical animacy hierarchy: speaker > hearer > human > animal > physical object > abstract entity. In this model, we would also expect to find first person to be higher than second person in “empathy”.

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rates for second person subjects with third person objects, are unexpected based on the animacy scale. While the latter of these can be largely attributed to distributional holes in the data, the former suggests that highly animate subjects and objects result in quite high rates of enclisis. In fact, while the animacy scale may offer a convenient way to explain this behavior, the more accurate generalization seems to be that first person subjects with all clitics and singular second person subjects with first person clitics are the ones that display high rates of enclisis in the presence of a trigger. Or, more generally, human subjects—that is, canonical ones—in the presence of similarly highly animate objects show a tendency toward higher rates of non-normative enclisis in triggered contexts, if we ignore the empty cells in the data. This question of animacy, and relative animacy specifically, will be explored further in the results for the third person direct object pronouns in §4.4.

Finally, verbal constructions play a pivotal role in the variation in clitic object placement. Table 11 below shows general distributions based on one of four kinds of predicate: simple predicates involving a single verb, perfect and progressive constructions that involve a finite verb plus a participle (perfect) or infinitive verb (progressive), ‘movement constructions’ that include a verb of motion (\textit{ir}, \textit{vir}, \textit{andar}) plus a nonfinite form, and modal environments (i.e. \textit{poder}, \textit{dever}, \textit{querer}, etc. plus an infinitive).
<table>
<thead>
<tr>
<th></th>
<th>Modal</th>
<th>Movement</th>
<th>Perfect/Progressive</th>
<th>Simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>74/316</td>
<td>31/71</td>
<td>52/59</td>
<td>1033/1108</td>
</tr>
<tr>
<td>Enclitic</td>
<td>242/316 (77%)</td>
<td>40/70 (56%)</td>
<td>7/59 (12%)</td>
<td>75/1108 (7%)</td>
</tr>
<tr>
<td>Total N</td>
<td>316/1554 (20%)</td>
<td>70/1554 (5%)</td>
<td>59/1554 (4%)</td>
<td>1108/1554 (71%)</td>
</tr>
</tbody>
</table>

Table 11. Distribution of clitic placements in EP by construction type. Modals (dever, querer, poder, etc.) function most like ir/ir/andar constructions. Perfects, progressives, and simple single-verb predicates show much lower rates of enclitic placement.

The above table is split into complex predicates on the left and simple predicates on the right. Perfect forms have been classified as ‘simple’ because of limitations with respect to clitic attachment, as well as the fact that the auxiliaries for perfects differ in nature from those used with modals. In essence, perfect constructions require a form of ter or haver ‘to have’ as the auxiliary, followed by a past participle form of the lexical verb. The clitic can only attach to the auxiliary, either as a proclitic or an enclitic, in much the same way that clitics attach in one of two positions in single-verb predicates. Additionally, perfect constructions require the auxiliary for tense and aspect information and not for other semantic content, more like simple verbs than true modal constructions. Progressives or duratives (‘to be Xing’) are similar to perfects in this respect, since the auxiliary estar provides tense and aspect information in much the same way. The distributions in Table 11 above indicate that perfect and progressive constructions function most like simple predicates, with the auxiliary providing tense and aspect to a lexical verb that is encoded by a nonfinite form. Meanwhile, the complex predicates, including modals and ‘movement’ verbs, show extremely high rates of non-normative enclisis. The regression model confirms the statistical significance of this factor.
Table 12. Regression results for enclisis in EP by construction type. Modals (deber, querer, poder, etc.) and ir/vir constructions, with estimates greater than 0 and low p-values, indicate a favoring effect of these forms on enclitic placement. Perfects and progressives were collapsed with simple verb constructions to resolve statistical errors caused by low token counts; their estimates below 0 reflect a disfavoring effect with respect to enclisis. Sum contrasts were used to compare estimates against the average for the group.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-0.2360</td>
<td>0.2020</td>
<td>-1.168</td>
<td>0.2427</td>
<td></td>
</tr>
<tr>
<td>Modal</td>
<td>2.3843</td>
<td>0.2491</td>
<td>9.573</td>
<td>&lt; 0.001 ***</td>
<td>242/316 (77%)</td>
</tr>
<tr>
<td>Movement (ir/vir)</td>
<td>0.5595</td>
<td>0.2362</td>
<td>2.369</td>
<td>&lt; 0.05 *</td>
<td>40/71 (56%)</td>
</tr>
<tr>
<td>Simple, Perfect, Progressive</td>
<td>-2.9532</td>
<td>0.2436</td>
<td>-12.125</td>
<td>&lt; 0.001 ***</td>
<td>75/1108 (7%)</td>
</tr>
</tbody>
</table>

Table 13. Rate of enclisis in EP by construction type and mode. Notably, the rate of enclisis in the presence of a proclisis trigger is actually higher in written registers than in oral ones in the presence of modal and movement constructions, while the rate is significantly lower in written registers than in oral ones for simple and perfect/progressive constructions.

<table>
<thead>
<tr>
<th></th>
<th>Modal</th>
<th>Movement (ir/vir/ andar)</th>
<th>Perfect/Progressive</th>
<th>Simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>64% (14/22)</td>
<td>10% (1/10)</td>
<td>27% (3/11)</td>
<td>26% (47/184)</td>
</tr>
<tr>
<td>Written Reported</td>
<td>78% (182/232)</td>
<td>61% (33/54)</td>
<td>9% (4/46)</td>
<td>4% (27/735)</td>
</tr>
<tr>
<td>speech in written</td>
<td>74% (46/62)</td>
<td>87% (6/7)</td>
<td>0% (0/2)</td>
<td>&lt;1% (1/162)</td>
</tr>
</tbody>
</table>

The intersection between construction type and mode illuminates important differences with respect to placement patterns, since it is only with the simple and perfect/progressive constructions that the expected decrease in non-normative behavior in written registers is found. In contrast, non-normative behavior seems to be more common in written sources for modal and movement verbs. This may be an effect of the types of modal constructions found in the different kinds of documents, while the expected drop in enclisis in the simple constructions relates to the general conservative nature of writing in contrast with speech. While the results presented in Tables 12 and 13 are suggestive of constructional
differences potentially related to simple predicates and predicates that appear to be analyzed as simple constructions due to advanced grammaticalization, a closer look at individual verbs and their variation can help us understand which other constructional factors are affecting the variation, including the variation found in the lefthand panes of Table 13. Table 14 below offers exactly this sort of information.

<table>
<thead>
<tr>
<th>First verb in complex predicate</th>
<th>Proclisis</th>
<th>Enclisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tentar ‘to try to X’</td>
<td>0/6</td>
<td>6/6 (100%)</td>
</tr>
<tr>
<td>Procurar ‘to seek to X’</td>
<td>0/5</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Pretender ‘to attempt to X’</td>
<td>0/6</td>
<td>6/6 (100%)</td>
</tr>
<tr>
<td>Resolver ‘to resolve/decide to X’</td>
<td>0/6</td>
<td>6/6 (100%)</td>
</tr>
<tr>
<td>Conseguir ‘to manage to X’</td>
<td>1/26</td>
<td>25/26 (96%)</td>
</tr>
<tr>
<td>Querer ‘to want to X’</td>
<td>12/57</td>
<td>45/57 (79%)</td>
</tr>
<tr>
<td>Dever ‘should X’</td>
<td>6/23</td>
<td>17/23 (74%)</td>
</tr>
<tr>
<td>Saber ‘to know (how to)’</td>
<td>3/10</td>
<td>7/10 (70%)</td>
</tr>
<tr>
<td>Vir ‘to come to X’</td>
<td>8/26</td>
<td>18/26 (69%)</td>
</tr>
<tr>
<td>Poder ‘to be able to X / can X’</td>
<td>46/151</td>
<td>105/151 (69%)</td>
</tr>
<tr>
<td>Ir ‘to be going to X’</td>
<td>22/48</td>
<td>26/48 (54%)</td>
</tr>
<tr>
<td>Estar (a) ‘to be Xing’</td>
<td>11/13</td>
<td>2/13 (15%)</td>
</tr>
</tbody>
</table>

Table 14. Rates of pro- vs. enclitic placement in normatively proclitic contexts in complex predicates in EP.

As we can see in Table 14, verbs providing more semantic information at the top of the table show very high, and sometimes categorical, enclisis in proclisis-triggered environments. Meanwhile, the middle group containing true modal and modal-like verbs maintains a high, but not categorical, rate of non-normative placement. Finally, the last group containing only the progressive form _estar a_ + infinitive ‘to be Xing’ hovers just
above the average for the simple and perfect forms in terms of its rate of non-normative enclisis in these contexts. This pattern is quite similar to that shown by Schwenter & Torres Cacoullos (2010) in Mexican Spanish for pre- and postverbal placement of clitics in complex predicates. While these authors do not consider particular ‘triggered’ contexts, the similarities illustrated in both the ordering and the gradience of the enclisis patterning is suggestive of a cross-linguistic link. Schwenter & Torres Cacoullos (2010, 2014a) argue that the pattern found in their data for different verbs reflects a grammaticalization scale, given that true movement *ir* has a significantly higher rate of enclisis than does the grammaticalized future *ir* in their Mexican Spanish data. These potential of grammaticalization effects in EP are further explored below in §4.3 with respect to verbal frequency.

The final piece of the statistical analysis is the conditional inference tree, which provides a more detailed analysis than is available with the random forest and the regression analysis. While the random forest provides information that aids in the selection of the best of multiple collinear variables to include in an analysis, as well as a basic idea of the general effect of each variable independently, the regression analysis gives the researcher detailed information about the statistical significance of the variables and the directionality of the effect of each variant. In contrast, the conditional inference tree offers evidence of interactions between variables. In short, even when an independent variable is not found to have an independent effect on the dependent variable in the regression model, a more subtle interaction may be found in the building of the conditional inference tree, which produces a bi-branching division between categories.
and shows fine-grained interactions. The full conditional inference tree for the placement of personal pronouns in proclisis contexts in EP is shown in Figure 3.

The conditional inference tree indicates that construction type in the top branches has the strongest influence on the variation, with modal and movement verbs clustering together in opposition to perfect/progressive and simple verbs.
Figure 3. Conditional inference tree for postverbal placement of EP personal pronouns.
Continuing down the tree on the left, verb tense is the next most powerful effect for complex verbal constructions, with past tense verbs showing quite a high rate of enclisis when compared with future and present. Within the present- and future-reference complex verbal constructions, the function of the object clitic as accusative, dative, or reflexive plays a role. In essence, direct objects and reflexive pronouns pattern together, while indirect objects show a lower rate of non-normative enclisis. The clustering of direct objects and reflexive pronouns is expected, since in many cases reflexive pronouns function as direct objects. Furthermore, canonical indirect objects are human, while canonical direct objects are not; thus, the division between the two in terms of overall rates of enclisis and other factors that they interact with is expected since the two groups inherently differ in terms of the canonicity of the forms involved. This pattern parallels Andrade’s (2010c) results that show less clitic climbing—or more enclisis to the lexical verb in complex verbal constructions—for accusatives and reflexives than for datives, as well as Davies’ (1995) results for Spanish which exhibit more enclisis for reflexives than for non-reflexives. These authors explain the difference as related to animacy and topicality effects, with reflexives inherently human but coreferent with the subject and therefore less topical; accusatives are also thought to be less topical than datives by Andrade (2010c), presumably because accusatives are prototypically inanimate. However, by including only personal pronouns in the present analysis, issues of absolute animacy (as opposed to relative or scalar animacy) and topicality cannot be measured simply by the object’s case. These issues of animacy and topicality will be further explored with reference to third person accusative objects later in this chapter.

Finally, within the category of direct objects and reflexive pronouns, we see a
higher rate of enclisis in fictional sources than in oral interviews and news. This is unexpected given the results in Table 4 for register, since interviews generally show a higher rate of non-normative enclisis. The results presented in Table 13, meanwhile, show that the rates of enclisis differ jointly by register and construction type, with oral registers showing a higher rate of enclisis with simple or grammaticalized verbal constructions. This is reflected in the righthand branch of the conditional inference tree, which shows that the written vs. oral distinction is the most important for simple and perfect/progressive constructions. Within written modes, simple verb forms show a distinction between first person subjects and other subject forms. As shown in Tables 8 and 10, first person subjects present a higher rate of enclisis in the presence of proclisis triggers, and second and third person subjects show a lower rate. For these second and third person subjects, when the clitic is first person singular (me), enclisis is slightly more common than for other object forms. Table 10 shows in greater detail that this result is carried by the 2sg and 3sg subject forms. Following Myhill (1988), this result is somewhat counter-expectation, since an object that is more animate than the subject would be expected to be placed preverbally. Given that the rates of enclisis are quite low in general in this category, however, it could be argued that all pronouns under this branching favor preverbal placement. Under the first person subjects branch, future and present tense forms show a significantly higher rate of enclisis than past tense forms, contrasting with the pattern shown for complex verbs on the lefthand side of the inference tree. That is, past tense appears to be a facilitator for enclisis in the presence of complex verbal constructions, while simple and perfect verb forms find enclisis inhibited by past tense. It could be the case that past tense forms require more processing effort with
simple verbs but less with modal constructions since many of the modals are high frequency, reflecting fossilized irregular verb forms.

Separating out conditional inference trees by written and oral modes uncovers differences between the grammars underlying the clitic placement rules in the two modes of communication. In the oral data (Figure 4), only one factor appears to be influencing the variation: that of subject form. First person subjects have a much higher rate of enclisis in proclisis-triggered contexts than second or third person subjects. Although higher rates of first person subjects and objects would be expected in natural speech than in writing, the conditional inference tree in Figure 4 suggests that the grammar for speakers in a register in which less attention is paid to language use is rather simplified, and any relative animacy effect that is encoded in the written language has been simplified to an effect of subject form alone. In written modes of communication (Figure 5), however, the grammar is considerably more complicated, and the conditional inference tree reflects the one produced for the entire data set in Figure 3.
Figure 4. Conditional inference tree for enclisis of personal pronoun clitics in spoken EP.

Figure 5. Conditional inference tree for postverbal personal pronoun placement in written EP.
Another way to divide the data is by looking at construction type separately and comparing the grammar of complex constructions with that of simple constructions.

Figure 6. Conditional inference tree for enclitic placement of personal clitic pronouns for simple, progressive, and perfect predicates.
As can be seen in the above figures, clitics in the presence of these two kinds of verbal constructions follow separate patterns. Simple verbs have the highest rate of enclisis in speech, with written sources showing generally lower rates. The higher rates within the written genre are found with first person subjects in the presence of present and future reference verbs. The relative animacy of the object and subject, which were not shown to be especially important for second and third person subjects in Table 10, appears to have an effect only within written registers in contexts containing simple verbs.

Modal constructions, meanwhile, display a strong effect of tense, with past tense forms facilitating a very high rate of non-normative enclisis. Within the other tenses, direct objects and reflexive clitics are more likely to be placed postverbally than indirect
objects, a result in line with Andrade (2010c) and Davies (1995). Finally, fictional sources show a higher rate of enclisis than news or interviews for present and future tenses, suggesting an important divergence from the written versus oral distinction made for simple verbal constructions. This division based on document genre only for direct objects and reflexive pronouns is the same as is found in the full conditional inference tree in Figure 3. As Table 13 illustrates, among the complex verbal constructions, the higher registers have the higher rates of non-normative enclisis. The division shown in Figure 7, however, suggests that the two ends of the register spectrum have lower rates of enclisis, while literary sources, which contain language that reflects both speech and higher registers, have a very high rate of enclisis. This difference may be attributed to stylistic concerns at play in the fictional sources, with more natural or naturalistic grammar governing the usage in speech and nonfiction sources.

Based on a portion of the data, priming seems to not play a role in the placement of personal pronoun clitic objects in EP. Table 15 shows the rate of enclisis by the form of the prior clitic and the distance back in discourse by counting clauses.
Table 15. Percent enclisis in the presence of trigger não based on the prior clitic form and number of clauses back to the prior clitic. More detailed coding was done to distinguish between equivalent clitic forms and the same form with a different referent, as well as different clitic forms with different referents and different forms with the same referent. The data indicate that form trumps function, and the clitic forms were collapsed accordingly.

Chi-square results indicate no significant differences in the rate of enclisis by the prior clitic form or distance back. A more detailed consideration of priming effects is provided in section 4.4 for third person direct objects.

4.3 Frequency effects

In this section, I examine the effect of verbal frequency on object clitic placement in the complex predicates that are shown above in Table 14. Considering the similarities with Mexican Spanish reported above (cf. Schwenter & Torres Cacoullos 2014a), the question of verbal frequency remains highly relevant for both this variety and for EP. That is, could the generalization of enclisis in EP, as put forth by Vigário & Frota (1998), be spreading in proclisis contexts based on verbal frequency? And, is verbal frequency the correct quantitative measure for Schwenter & Torres Cacoullos’ (2014a) assertion that placement patterns are based on the degree of grammaticalization of the predicate(s)?

64 The one exception is 8+ clauses back, enclitic same x no clitic (p < 0.05). This statistically significant difference is suspicious, though, due to the low token count in the enclitic same category.
To address these questions, frequency counts for each of the verbs presented in Table 14 were obtained from the *Corpus do Português* (Davies & Ferreira 2006-). Accordingly, the frequencies reflect the actual frequencies within the same dataset. Additionally, only frequency counts within the EP data in the corpus are included here, with frequency measures from BP left for analysis in Chapter 5. Two types of frequency measures are considered:

(46) Frequency Measures

a. General verbal frequency of the governing verb: This measure is determined by considering the number of occurrences of a single verb per million words in the corpus. Essentially, this is a frequency count of a given verb in all of its potential forms (i.e. token frequency across all forms), with no requirement that it be followed by another verb form.

b. Frequency of governing verb in V + infinitive sequences: This measure is determined by considering the occurrences of a given verb followed by another verb (in infinitival form) per million words in the corpus. Like the general frequency measure above, this includes all potential person/number/tense/aspect inflections of the verb in question, followed by any infinitive. For verbs like *estar* that are always followed by *a* before the nonfinite form, frequency is determined by including the required preposition.

Table 16 below builds on the information in Table 14 with the added frequency measures defined in (46).
Table 16. Rates of pro- vs. enclitic placement in normatively proclitic contexts with complex predicates, with added frequency counts for each verb per million words in the corpus. Only verbs with more than four token occurrences are included in the table.

<table>
<thead>
<tr>
<th>Governing verb in complex predicate</th>
<th>Proclitic</th>
<th>Enclitic</th>
<th>Frequency of governing verb (per million words)</th>
<th>Frequency of governing verb followed by an infinitive (per million words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolver ‘to resolve/decide to X’</td>
<td>0 / 6</td>
<td>6 / 6 (100%)</td>
<td>170.92</td>
<td>31.42</td>
</tr>
<tr>
<td>Pretender ‘to attempt to X’</td>
<td>0 / 6</td>
<td>6 / 6 (100%)</td>
<td>183.25</td>
<td>119.62</td>
</tr>
<tr>
<td>Group I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurar ‘to seek to X’</td>
<td>0 / 5</td>
<td>5 / 5 (100%)</td>
<td>258.14</td>
<td>94.27</td>
</tr>
<tr>
<td>Tentar ‘to try to X’</td>
<td>0 / 6</td>
<td>6 / 6 (100%)</td>
<td>270.67</td>
<td>194.04</td>
</tr>
<tr>
<td>Conseguir ‘to manage to X’</td>
<td>1 / 26</td>
<td>25 / 26 (96%)</td>
<td>549.46</td>
<td>297.59</td>
</tr>
<tr>
<td>Group II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Querer ‘to want to X’</td>
<td>12 / 57</td>
<td>45 / 57 (79%)</td>
<td>1402.66</td>
<td>699.13</td>
</tr>
<tr>
<td>Deber ‘should X’</td>
<td>6 / 23</td>
<td>17 / 23 (74%)</td>
<td>1072.97</td>
<td>659.48</td>
</tr>
<tr>
<td>Ver ‘to come to X’</td>
<td>8 / 26</td>
<td>18 / 26 (69%)</td>
<td>1327.68</td>
<td>185.89</td>
</tr>
<tr>
<td>Poder ‘to be able to X’ / can X’</td>
<td>46 / 151</td>
<td>105 / 151 (69%)</td>
<td>2992.59</td>
<td>2275.45</td>
</tr>
<tr>
<td>Ir ‘to be going to X’</td>
<td>22 / 48</td>
<td>26 / 48 (54%)</td>
<td>2854.18</td>
<td>1135.33</td>
</tr>
<tr>
<td>Group III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estar (a) ‘to be Xing’</td>
<td>11 / 13</td>
<td>2 / 13 (15%)</td>
<td>4289.53</td>
<td>605.55</td>
</tr>
</tbody>
</table>

The frequency information presented in Table 16 above shows a number of general trends with respect to the rate of enclisis in contexts with proclisis triggers. The first pattern that can be seen in this table is that the rate of enclisis decreases as the general frequency of the verbs in question increases: less frequent verbs tend toward non-normative behavior. Stated more concisely, there is a positive correlation between frequency and normative behavior: as verbal frequency increases, so does the rate of normative clitic object placement. The negative correlation between non-normative
behavior and frequency is shown in Figure 8 below. Davies (1997) and Andrade (2010a) report similar findings in their studies of clitic climbing in all (proclisis and enclisis) contexts, with a categorical bent: more clitic climbing (often, but not always, reflecting proclisis) is found with higher frequency governing verbs. Since clitic climbing resulting in enclisis is the more innovative option outside of contexts that trigger proclisis, they argue that high frequency verbs are driving a change toward increased clitic climbing. Meanwhile, the data here suggest that the high frequency verbs are, in fact, maintaining a conservative pattern synchronically, while lower frequency verbs follow the generalized pattern outside of these triggered contexts. While diachronic evidence is not available from my data, the high frequency modals (*poder, querer, dever*, etc.) are the ones that are most in flux, showing the greatest variation between the more conservative highest-frequency forms (*estar*) and the innovative lowest-frequency verbs. Since the lowest frequency verbs show categorical or near-categorical enclisis, however, these verbs appear to be driving a change toward the generalization of enclisis throughout the system (cf. Vigário & Frota 1998).
Figure 8. Rate of enclisis following proclisis triggers *que, não,* and *talvez* by general verbal frequency of the governing verb. All verbs from Table 14 are included, as well as others with lower token counts. Multiple R-squared = 0.914.

The results for frequency of the governing verb when followed by an infinitive show a similar pattern, albeit a bit less clear. That is, the same negative correlation between frequency and non-normative behavior can been seen below in Figure 9. It must be highlighted, though, that the general verbal frequency measure reported above in Figure 8, rather than frequency of the governing verb when followed by an infinitive, appears to be a better predictor for clitic placement in two-verb sequences. That is, the regression line is not as well fitted to the verb+infinitive frequency-to-rate of enclisis data with this second measure, as shown by the lower R-squared value for the correlation shown in Figure 9.\(^65\)

\(^65\) R-squared values vary between 0 and 1, with a higher number indicating a greater percentage of the variation explained through the correlation. Thus, the R-squared value of 0.914 in Figure 8 indicates that a very high proportion (i.e. 91.4\%) of the variation in rates of enclisis found in the data is explained by verbal
Figure 9. Rate of enclisis by frequency of governing/auxiliary verb when followed by an infinitive. Multiple R-squared = 0.3189.

Finally, the information provided in Figure 10 below illustrates the correlation between the two frequency measures. In essence, the general verbal frequency is directly correlated with the frequency of the verb when followed by an infinitive. Recall that general verbal frequency is expected to be much higher for most verbs than the verb+infinitive frequency measures: the general frequency is the token frequency of any form of the verb, while verb+infinitive frequency adds the constraint that the verb form must be followed by a nonfinite verb form.

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frequency, while the 0.3189 value in Figure 9 suggests that a considerably lower percentage of the variation is explained through the verb+verb frequency values.
In the lower left corner of the plot above are those verbs with the lowest general and verb sequence frequencies, which also display the highest rates of enclisis. From these figures, two patterns appear to be at play. The first is related to frequency: lower frequency governing verbs are more likely to follow an analogical trend of enclisis in contexts that are expected to trigger proclisis. The second trend relates to grammaticalization: the more grammaticalized a governing verb is in its auxiliary role, the more normative the clitic placement is. Accordingly, the progressive or durative construction of estar a + infinitive (‘to be Xing’) triggers proclisis at close to the same high rate as is found with simple verbal constructions. Both highly frequent and highly grammaticalized, normative placement is maintained in much the same way that it is for other grammaticalized constructions like compound perfects (ter + past participle ‘to have Xed’). As Bybee (2001) suggests, this highly frequent, more conservative construction is more likely to be
stored in memory as a single chunk and accessed as single unit. That is, since the \textit{estar} form can be interpreted as the inflectional information for the lexical verb, the resulting syntax is more likely to treat these constructions as a single unit in the lexicon, with less conflict between the prosodic and syntactic constraints on clitic placement. This contrasts with the other highly grammaticalized construction of \textit{ir} + infinitive (‘to be going to X’), which is largely used to indicate future tense. Although it is similar in its grammaticalization, \textit{ir} + infinitive has a considerably lower general frequency. Other true modals, like \textit{poder}, \textit{querer}, and \textit{dever}, have relatively high frequency and typically cooccur with an infinitive verb. This suggests that the predictable nature of these verbs makes it more or less equally possible for speakers to process clitics in either position, although processing load is reduced by keeping the clitic adjacent to its associated verb. I argue that the hypothesized change toward generalized enclisis (cf. Vigário & Frota 1998, Galves, Moraes & Ribeiro 2005) has had a more pronounced effect on the verbs in this group that are lower in both frequency measures. The lack of grammaticalization of the verbs in Group I, along with their generally lower frequencies, means that the cognitive load would be increased by placing a clitic close to the trigger (proclisis) rather than attached to its associated verb. The lower in Table 16 that verbs are placed, the higher the frequency; additionally, the lower the verb, the more likely it is to be a true modal or even a form that is further grammaticalized to carry tense and aspect information. These verbs in Groups II and III are typically less likely to be associated with a clitic because these auxiliaries are generally less transitive than the ones higher up in the table. Given the greater transitivity of the verbs higher in the table, the processing load in the triggered contexts is increased when the clitic is placed preverbally, whereas this is not the case for
the modals and tense/aspect auxiliaries in Groups II and III since these verbs are not typically associated with objects.

The results presented above suggest that frequency is an important factor in clitic placement in two-verb sequences in EP. While the most frequent and highly grammaticalized form maintains normative placement patterns in the presence of proclisis triggers, verbs with lower frequency that are also generally less grammaticalized diverge considerably. These results provide a motivation for previously posited theoretical approaches to clitic placement in EP. Specifically, Vigário & Frota (1998) and Galves & Sandalo (2012) both suggest that the trend in EP is toward a less phonologically- or prosodically-dependent system of placement. Although Galves & Sandalo (2012) posit that the (over)generalization of enclisis reflects speech errors by younger speakers—a nod toward a change in progress resulting in greater enclisis in EP—their general argument for a morphologized pronominal object clitic system is in line with Vigário & Frota’s analysis. The results presented here offer evidence for the schematization of the generalization of enclisis in complex verbal constructions following proclisis triggers, with lower frequency verbs with greater semantic content leading the change.

Speakers’ experience with respect to less frequent verbs that have associated object pronouns is limited, thus providing the necessary ingredients for analogical, generalized linguistic behavior (cf. Bybee 2010). This pattern is in line with established theories about analogical change, typically in morphosyntactic constructions, affecting low frequency forms first (Bybee 2002). If indeed proclitic placement in the presence of proclisis triggers is a remnant of a system that maintained dual phonological and
syntactic restrictions on placement, as suggested by Vigário & Frota (1998), it is not surprising that proclisis is more common in the presence of frequent forms that share the necessary conditions to maintain non-conforming and unproductive patterns. Such trends point to the interconnectedness of frequency and grammaticalization, given that grammaticalization often occurs due to the high frequency of the construction (Bybee 2001). Thus, highly frequent and grammaticalized auxiliaries like *estar a* + infinitive reflect the placement patterns found in simple predicates, while less grammaticalized and less frequent verbs appear to co-occur with an analogically leveled placement paradigm.

Furthermore, the conflict arising from the dual requirement for clitic hosting is naturally present in all complex predicates, since the clitics can either lean on the trigger or be adjacent to the verbal host with which they associate semantically. In these cases, the tendency toward resolution is, as Vigário & Frota (1998) assert, in favor of the syntax, resulting in enclisis. The exception is with *estar a* + infinitive because *estar* is functioning simply as an auxiliary to provide tense and aspect information for the lexical verb. Here, the conflict is less likely to result in enclisis, since the *estar* form can be interpreted as the inflectional information for the lexical verb. As Bybee (2010:71) explains with respect to frequency, “even after a construction has lost its productivity, specific exemplars of the construction may live on because they have accrued strength through repetition and so continue to be used”. *Estar a* + infinitive could be one such exemplar, with the other high frequency forms also clinging, to a lesser extent, to the older construction through their semi-grammaticalized usages. Such an analysis—with low frequency as a motivating factor for analogical change toward a non-normative usage pattern that has become possible through changes to the phonological and syntactic
restrictions in grammar—is suggestive of the importance of lexical frequency in the evolution of the phonology-syntax interface.

### 4.4 Results for Third Person Anaphoric Direct Objects

Third person direct object forms were considered separately from the personal object forms above. These exclusively third person accusative forms (*o, a, os, as*, with their allomorphic variants *-lo, -la, -los, and -las*) are typically anaphoric, reaching back in discourse to access the referent rather than indexing a speaker involved in the discourse. Because of this, additional factors were included in the analysis, including: the referential distance and topic persistence measures outlined in Chapter 3; subject and object animacy; the prior mention as subject, object, or proposition; and the form of the prior mention as a lexical NP, null form, proclitic, or enclitic. Overall distributions are presented in Table 17.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>648</td>
<td>65%</td>
</tr>
<tr>
<td>Enclitic</td>
<td>352</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Table 17. Distribution of EP data for third person direct object clitics following *que, não, and talvez.*

A total of 1000 tokens of these direct object pronouns in triggered contexts were extracted, and roughly 35% of these involve cases of non-normative enclisis. As with the personal pronoun data discussed earlier in the chapter, all cases of enclisis were extracted, while a sample of the proclisis cases was selected for inclusion through the use
of a number randomizer at twice the rate of the available enclitics. Table 18 below 
details the distribution of tokens by trigger word. There were no viable enclisis tokens 
involving third person direct object clitics following talvez that clearly had scope over the 
verb and clitic, suggesting that contexts with this trigger are not loci of variation for third 
person direct object clitics. Accordingly, this trigger was excluded from the analysis.

<table>
<thead>
<tr>
<th></th>
<th>que</th>
<th>não</th>
<th>talvez</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>287/459</td>
<td>361/541</td>
<td>—</td>
</tr>
<tr>
<td>Enclitic</td>
<td>172/459 (37%)</td>
<td>180/541 (33%)</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>459/1000</td>
<td>541/1000</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 18. Distribution of third person direct object forms by trigger word. No tokens triggered by talvez were included due to categorical normative behavior with third person direct object clitics.

Distributions based on the type of document are shown in Table 19. As can be seen in the 
percentages of enclisis, there is no difference in the rate of enclisis between oral 
interviews and fictional sources. However, the difference in the rate of enclisis between 
these modes and the higher register news and academic sources does emerge as 
statistically significant.

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66 The rate of proclisis to enclisis (10-15 to 1) for these third person direct object clitics is lower than found for the personal pronouns examined earlier in this chapter.
Table 19. Raw frequencies of proclitic and enclitic third person DO placement by type of document. Chi-square results indicate that the rate of enclisis does not significantly differ between oral interviews and fiction (Interview x Fiction: $\chi^2 = 0.307\times10^{-1}$, df = 1, $p > 0.05$), while the difference in rate of enclitic placement differs significantly between the other two document pairings: Interview x News/Acad: $\chi^2 = 8.25$, df = 1, $p < 0.01$; Fiction x News/Acad: $\chi^2 = 18.6$, df = 1, $p < 0.001$.

To determine which of certain collinear factors to include in the regression models, a random forest was built showing the independent correlation of each of the independent variables. The random forest below shows the correlation of the factors with enclitic object pronoun placement in the presence of proclisis triggers *que* and *não.*

**Random forest: ranking of independent variables affecting clitic placement of anaphoric DOs in EP**

*Figure 11. Random forest including all factors for consideration in the regression analysis for third person object pronouns. The dots further to the right indicate a stronger independent correlation with the dependent variable, while the dots further to the left are suggestive of a weaker effect. The ranking of variables from top to bottom similarly corresponds with a stronger correlation.*
Much like the results seen in the random forest for personal object pronouns in Figure 2, construction type is most strongly correlated with non-normative enclisis in the presence of proclisis triggers. Verbal frequency of the lexical verb in simple and complex verbal constructions appears to be a stronger predictor of the variation than does the verbal frequency of the finite verb, i.e. a stronger effect of nonfinite rather than finite form is found. New collinear factors in this dataset include the prior mention as subject or object and the form of the prior mention. Specifically, the form of the prior mention was coded as proclitic, enclitic, null object, null subject, or lexical NP (including pronouns), some of which directly correlate with whether the prior mention is a subject or object. Accordingly, since the form of the prior mention is higher in the ranking, this measure is included in the regression analysis.

With respect to the operationalized measures of topicality, six factors are included in the random forest. Topic persistence (TP) refers to the number of mentions of the clitic’s referent within the following five clauses, and backwards topic persistence (BTP)—corresponding to Shain’s (2009) B-TP measurement—measures the number of occurrences of the clitic’s referent in the prior five clauses. The combined measure (CombinedTP) refers to the sum of the two numbers obtained for TP and BTP, with a higher joint score indicating greater topicality of the referent. Referential distance (RD) indicates the number clauses back from the clitic to the prior mention of the referent, while backwards referential distance (BRD)—corresponding to Shain’s (2009) F-RD category—counts the number of clauses forward in discourse from the clitic to the next mention of the same referent. The combined measure (CombinedRD) is the addition of these two numbers, with a lower joint score indicating greater topicality of the referent.
Since all topic persistence and referential distance measures cluster together at the bottom of the random forest, indicating little correlation with clitic placement, these measures were examined separately from the regression analysis. The results for these measures are found in Tables 30 and 31.

Subject animacy and person/number are also inherently collinear, since first and second person subjects will necessarily reflect human referents. While subject animacy appears to be more correlated with clitic placement than subject person and number in the random forest above, it was decided to include the latter in the regression analysis and exclude the former. The reasoning behind this is that subject person and number offers a more fine-grained approach to the question of subject animacy. Animacy of the subject is explored separately, particularly with respect to third person subject forms, in Tables 24-27.

The mixed effects regression models were built by including the variables discussed above, with the additional random effects reflecting the source document and the verb. Using the same methodology as was employed with the personal object pronouns, a step-wise function was used to determine the factors to add in one by one to the models, followed by model comparison using ANOVA. The best fit model selected by the ANOVA shows construction type, document type, and subject as significant predictors of the variation. Construction type refers to the verbal complexity.

67 Although verbal frequency appears strongly correlated with enclisis in the random forest in Figure 11, it was not selected by the analysis as a significant predictor once the random effects were added in. Namely, since the verb was used as a random effect in the analysis, and verbal frequency is directly correlated with verb itself, all of the variation explained by frequency effects was discounted by the inclusion of the random effect. Thus, frequency will be discussed separately.
Interestingly, the rates of enclisis for anaphoric third person direct object pronouns differ from those seen for the personal pronouns (cf. Table 11). For instance, progressive constructions (estar a + infinitive ‘to be Xing’) and perfects (haver/ter + past participle ‘to have Xed’) function in completely opposing ways for these pronouns. Although both constructions have relatively low enclisis rates with personal object pronouns, functioning most like simple single-verb constructions, these third person accusative clitics show categorical enclisis with progressives and categorical proclisis in the presence of perfects. Because the low token counts for progressive and perfect forms may be related to my particular data set rather than true categorical behavior within the system, these groups are not excluded from the data analysis but rather collapsed with the verb groups that they are most like. In essence, perfects and simple verbs are considered together in the statistical analysis, while progressives are joined with modals and movement verbs. This collapsing reflects the general clitic placement options within each category: progressives, like modals, allow clitic placement before the finite form or following the infinitive; perfects, on the other hand, function more like simple verbs by allowing clitic placement before or after the finite verb only. Besides similarities in the possible clitic behaviors, the similar function seen between the progressive construction

<table>
<thead>
<tr>
<th></th>
<th>Progressive (estar a)</th>
<th>Modal</th>
<th>Movement (ir/vir/andar)</th>
<th>Simple</th>
<th>Perfect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>0/13</td>
<td>52/315</td>
<td>14/57</td>
<td>559/592</td>
<td>23/23</td>
</tr>
<tr>
<td>Encletic</td>
<td>13/13 (100%)</td>
<td>263/315 (83%)</td>
<td>43/57 (75%)</td>
<td>33/592 (6%)</td>
<td>0/23 (0%)</td>
</tr>
<tr>
<td>Total N</td>
<td>13/1000 (1%)</td>
<td>315/1000 (32%)</td>
<td>57/1000 (6%)</td>
<td>592/1000 (59%)</td>
<td>23/1000 (2%)</td>
</tr>
</tbody>
</table>

Table 20. Distribution of anaphoric direct object clitic placement in the presence of different verbal constructions.
and modals with third person DOs may have to do with an avoidance of vowel-vowel sequences in Portuguese, as Simões’ (2006) suggests. Overall, the modal and movement verbs, as well as simple verb phrases, display the same general trend as seen in Table 11.

<table>
<thead>
<tr>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-0.2349</td>
<td>0.2063</td>
<td>-1.139</td>
<td>0.2548</td>
</tr>
<tr>
<td>Modal / Movement / Progressive</td>
<td>2.9040</td>
<td>0.2985</td>
<td>9.729</td>
<td>&lt; 0.001 ***</td>
</tr>
<tr>
<td>Simple, Perfect</td>
<td>-2.9040</td>
<td>0.2985</td>
<td>-9.729</td>
<td>&lt; 0.001 ***</td>
</tr>
</tbody>
</table>

Table 21. Regression results for enclitic placement for anaphoric DO pronouns by construction type. Sum contrasts were used to compare the levels against the average for the entire factor.

Table 21 confirms the statistical significance of the difference in enclisis rates between the two groups of verbal constructions. Construction type seems to play an even more crucial role for these direct object forms than for the personal object pronouns, with a more salient difference in the rate of enclisis between single- and multi-verb predicates.

Document type is also strongly correlated with the placement of these clitics.

<table>
<thead>
<tr>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-0.2349</td>
<td>0.2063</td>
<td>-1.139</td>
<td>0.2548</td>
</tr>
<tr>
<td>fiction</td>
<td>0.0524</td>
<td>0.1961</td>
<td>0.267</td>
<td>** not significant **</td>
</tr>
<tr>
<td>oral interview</td>
<td>0.7139</td>
<td>0.2575</td>
<td>2.772</td>
<td>&lt; 0.01 **</td>
</tr>
<tr>
<td>news &amp; academic</td>
<td>-0.7663</td>
<td>0.2250</td>
<td>-3.406</td>
<td>&lt; 0.001 ***</td>
</tr>
</tbody>
</table>

Table 22. Regression results for enclitic placement of third person direct object pronoun forms by document type. Sum contrasts were used to compare the levels against the average for the entire factor.
Like with personal object pronouns, oral interviews and literary texts show similar rates of enclisis in triggered contexts, and less enclisis is found in the higher register. However, significantly more enclisis is present in the highest register with the third person DOs than in the same high register with other object pronouns ($\chi^2=10.4$, df=1, p=0.001).

Similarly, the rate of enclisis within fictional documents is also significantly higher for third person DOs ($\chi^2=40.5$, df=1, p<0.001). While some of this effect can be attributed to the overall higher rate of enclisis within this data due to the criteria used for token extraction, the fact that the difference is only found in the written registers suggests that the constructional effect is stronger with these pronouns than with the personal pronouns, while register is considerably less important in the selection of proclisis or enclisis with third person DOs.

The subject form is the final factor that emerges as significant in the regression analysis.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-0.2349</td>
<td>0.2063</td>
<td>-1.139</td>
<td>0.2548</td>
<td></td>
</tr>
<tr>
<td>1&amp;2</td>
<td>0.3283</td>
<td>0.1469</td>
<td>2.236</td>
<td>&lt;0.05 *</td>
<td>106/237 (45%)</td>
</tr>
<tr>
<td>3</td>
<td>-0.3283</td>
<td>0.1469</td>
<td>-2.236</td>
<td>&lt;0.01 **</td>
<td>246/763 (32%)</td>
</tr>
</tbody>
</table>

Table 23. Regression results for enclitic placement of third person direct object pronoun forms by the person of the subject. First and second person subjects are considered together because of similarities in animacy and low token counts across second person forms.

Based on the positive estimate for first person subjects, it can be said that first person subjects with third person accusative objects favor non-normative enclisis in proclisis-triggering contexts. Myhill’s (1988) prediction for Spanish clitics suggests that an object
that is less animate than the subject would be more likely to be placed postverbally, which is borne out by the results shown above with highly animate first and second person subjects in the presence of less animate third person objects. The animacy of the object, however, did not emerge as significant in the analysis. When accounting for the animacy of the object and the subject form, the following pattern is found:

Table 24. Object placement by subject form/animacy by the animacy of the accusative object. Chi-square results indicate no significant difference between human and nonhuman objects within each subject category. Furthermore, first and second person subjects and third person human subjects show no statistically significant differences when object animacy is held constant across the subject forms. The difference across the animacy categories is significant. 1st-2nd subjects with human objects x 3rd nonhuman subjects with human objects: $\chi^2=22.7, \ DF=1, p<0.001$; 1st-2nd subjects with nonhuman objects x 3rd nonhuman subjects with nonhuman objects: $\chi^2=17.5, \ DF=1, p<0.001$; 3rd human subjects with human objects x 3rd nonhuman subjects with human objects: $\chi^2=31.2, \ DF=1, p<0.001$; 3rd human subjects with nonhuman objects x 3rd nonhuman subjects with nonhuman objects: $\chi^2=14.4, \ DF=1, p<0.001$.

Table 24, showing the intersection of subject animacy with animacy of the object, points to a relative animacy effect in proclisis-triggered contexts in EP. That is, first and second person subjects are always higher on the animacy scale than third person direct objects, and these subjects in combination with third person objects show relatively high rates of postverbal clitic object placement. Meanwhile, third person subjects may or may not be more animate than third person objects. In these cases, a large animacy differential is unlikely. However, when subject animacy is accounted for among these third person
subjects, a clear animacy effect can be seen: human subjects correspond to higher rates of non-normative enclisis in triggered contexts, while nonhuman subjects are more resistant to non-normative enclisis. First and second person subjects show rates of non-normative enclisis in the presence of both human and nonhuman objects that are parallel to those found for third person human subjects in the presence of both human and nonhuman accusative objects. Although not statistically different from the rate found with other third person nonhuman subjects, the lowest rates of non-normative enclisis are found when the subject is nonhuman and the object is human. Comparing enclisis rates with human objects between the human subject categories and the nonhuman category presents a statistically significant difference. The data presented in Table 24 thus support the hypothesis that highly animate subjects paired with less animate objects will result in more non-normative enclisis, providing stronger evidence than that obtained for personal object pronouns in Table 10. Myhill’s (1988) analysis for Spanish object pronoun placement in two-verb sequences is thus replicated in European Portuguese across multiple construction types in contexts that contain proclisis triggers. This novel finding is suggestive of a larger cross-linguistic trend with respect to animacy, in that animate subjects paired with lower animacy objects show increased rates of enclisis in both Spanish and EP. However, such an analysis must note that the situations in EP and Spanish differ in important ways, given that the relative animacy effect in the former reflects proscribed, non-normative behavior and in the latter reflects unstigmatized variation.

Differential object marking (DOM) occurs cross-linguistically to mark differences between prototypical and non-canonical objects. Accordingly, non-canonical objects—
animate, definite, and specific ones—are thought to receive special encoding to
distinguish them from canonical subject forms that share these properties (Aissen 2003).
Spanish and Portuguese have been shown to be languages with DOM, in that Spanish
specially marks non-canonical, human-specific objects with the preposition a, while
Portuguese marks these objects through overt expression (cf. Schwenter 2013a,
Schwenter 2014). Schwenter (2014) finds that, in fact, only about 23% of anaphoric
direct objects in spoken EP are expressed as clitics, in contrast with about 41% as null
and 37% as lexical NPs. Of the animate objects in his data, however, approximately 55%
are expressed as clitics; the remaining animate objects are split evenly between nulls and
lexical NPs. Among the inanimate objects, however, only 14% are expressed as clitics. In
my data set containing only clitic forms, almost exactly half reflect nonhuman
(inanimate) referents, which can be accounted for due to the multiple spoken and written
modes included in my study. While object animacy clearly plays a role in whether an
object is explicitly expressed in EP (Schwenter 2013a, Schwenter 2014), the data above
suggest object animacy alone cannot explain the variation in placement of the clitic
forms.

Differential subject marking (DSM), in contrast, reflects a difference in subject
marking typically due to differences in prominence between the arguments in transitive
phrases. Under Aissen’s (2003) approach, DSM is assumed to mirror DOM, in that
subjects that are atypical and low in prominence—or those that are inanimate, indefinite,
and nonspecific—receive special case marking. This mirroring of DOM and DSM has
recently been critiqued because DSM varies considerably cross-linguistically, sometimes
involving special marking of highly prominent subjects and showing different patterns
for nominative-accusative languages when compared with ergative ones (de Hoop & de Swart 2008). However, it has been generalized that DSM is triggered in ergative languages when there is a distinction in prominence level in subjects, while DOM is the result when prominence distinctions occur between objects in nominative-accusative languages (ibid.). Thus, when an object is animate and/or definite, it is a marked form and would be expected to receive special case-marking; in contrast, when a subject is inanimate and/or indefinite, DSM would be called for to flag it as a marked or unexpected form. Although Spanish and Portuguese are not typically thought of as languages with DSM, and they instead display varying kinds of DOM that are more expected in nominative-accusative varieties, the patterns above suggest that certain morphosyntactic conditions (i.e. normatively proclisis contexts with anaphoric direct object clitics) can trigger patterns of DSM. That is, nonhuman subjects appear to be uniquely marked in the syntax (even if they reflect null forms themselves) by promoting normative proclisis of the object pronoun. Put another way, non-canonical subjects, with or without a large prominence differential with respect to the direct object form, appear to inhibit non-normative clitic object placement in EP. Canonical subjects, on the other hand, allow for higher rates of non-normative clitic placement, suggesting that canonical subjects license analogical change by allowing clitics in triggered contexts to be placed in a position that closely matches the typical placement in unmarked, untriggered contexts.

By further breaking down the data by construction type, we find a distinction in the subject animacy patterns between complex verbal constructions and simple, single-verb phrases:
Table 25. Object placement by subject form/animacy by the animacy of the accusative object, when the verb phrase consists of two verbs in a restructuring context. High rates of non-normative enclisis are found throughout subject and object forms, with no significant differences found between enclisis rates with the same subject animacy type. Only one significant difference is found between subjects. First and second person subjects, nonhuman objects x third person nonhuman subjects, nonhuman objects: $\chi^2 = 4.60$, df=1, $p<0.05$.

<table>
<thead>
<tr>
<th>Subject form</th>
<th>Object animacy</th>
<th>1st &amp; 2nd person (human)</th>
<th>3rd person human</th>
<th>3rd person nonhuman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Human</td>
<td>Nonhuman</td>
<td>Human</td>
<td>Nonhuman</td>
</tr>
<tr>
<td>Proclitic</td>
<td>6/46</td>
<td>16/61</td>
<td>17/109</td>
<td>17/99</td>
</tr>
<tr>
<td>Enclitic</td>
<td>40/46</td>
<td>45/61</td>
<td>92/109</td>
<td>82/99</td>
</tr>
</tbody>
</table>

(87%) (74%) (84%) (83%) (79%) (92%)

Table 26. Object placement by subject form/animacy by the animacy of the accusative object, when the verb phrase consists of a single verb. Low rates of non-normative enclisis are found throughout subject and object forms, with no significant differences found between enclisis rates with the same subject animacy type. Within-subject variation in clitic placement is found only with first and second person subjects: First and second person subjects, human objects x first and second person subjects, nonhuman objects: $\chi^2 = 10.4$, df=1, $p<0.001$. Clitic placement of nonhuman objects in the presence of highly animate first and second person subjects also differs significantly from the nonhuman objects in the presence of third person subjects: First and second person subjects, nonhuman objects x third person human subjects, nonhuman objects: $\chi^2 = 13.1$, df=1, $p<0.001$; first and second person subjects, nonhuman objects x third person nonhuman subjects, nonhuman objects: $\chi^2 = 25.1$, df=1, $p<0.001$.

<table>
<thead>
<tr>
<th>Subject form</th>
<th>Object animacy</th>
<th>1st &amp; 2nd person (human)</th>
<th>3rd person human</th>
<th>3rd person nonhuman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Human</td>
<td>Nonhuman</td>
<td>Human</td>
<td>Nonhuman</td>
</tr>
<tr>
<td>Proclitic</td>
<td>52/54</td>
<td>58/77</td>
<td>113/115</td>
<td>105/112</td>
</tr>
<tr>
<td>Enclitic</td>
<td>2/54</td>
<td>19/77</td>
<td>2/115</td>
<td>7/112</td>
</tr>
</tbody>
</table>

(4%) (25%) (2%) (6%) (1%) (2%)

The above tables show starkly different patterns with respect to relative animacy by verbal construction type. Comrie (1989) has pointed out that canonical subjects within transitive phrases are human and objects in transitive sentences are nonhuman; this pattern is replicated cross-linguistically, such that the subject typically outranks the object
in prominence—that is, in animacy and specificity—in canonical transitive sentences. Thus, within complex verbal constructions (Table 25), the most canonical subjects (1st & 2nd person, human) paired with the most canonical objects (nonhuman) show the lowest rates of non-normative behavior, while the least canonical subjects (3rd person nonhuman) in combination with the most canonical objects (nonhuman) show the highest rates of non-normative clitic placement. With respect to the canonical subjects (1st & 2nd person) paired with canonical objects (nonhuman), the opposite is found in the presence of simple verb phrases, recording the highest rates of non-normative enclisis in contrast with the near-categorical proclisis found with other subject and object animacy pairings. This suggests that, if analogical change is indeed underway, led by complex verbal constructions in general, the contexts that lead this change across other construction types involve cases of more canonical subject and object animacy pairings within transitive sentences. Since the rate of enclisis is so low in general across simple verb phrases, it appears to be only in the most predictable cases that objects receive a more than negligible amount of analogical treatment, placing clitics postverbally as is done standardly outside of triggered contexts. These prototypical cases, then, seem to be functioning as the entry point of the analogical pattern into the grammar for single-verb phrases. In contrast, in the presence of complex verbal constructions involving more than one verb and a non-prototypical subject that references a nonhuman entity in the discourse, the same analogical behavior is seen. Complex verbal constructions are, generally speaking, loci of enclisis throughout the grammar in triggered contexts, and the analogical implementation of categorical enclisis in this system nears completion when the subject-object animacy differential is minimal (as seen especially in the first and last
columns in Table 25). The grammar accordingly pushes the cases in which subject-object prominence—or animacy—distinctions are the least clear toward categorical behavior that most closely reflects the general behavior observed with the construction type and, more generally, the pattern found outside of the triggered contexts. The postverbal object placement in these cases could be standing in for other kinds of marking to distinguish subjects from objects, promoted by the syntactic and semantic association of the clitic with the lexical verb in infinitival form and possibly indicative of change toward a more rigid word order to encode the lack of subject-object prominence distinctions.

We can see in the righthand pane of Table 27 that the lowest rates of non-normative enclisis are found consistently across registers in the presence of nonhuman subjects and human objects, i.e. in the most non-canonical animacy arrangements. However, the registers differ with respect to the rate of enclisis by object animacy. That is, in fictional and oral sources, human subjects paired with nonhuman objects show higher rates of non-normative enclisis in triggered contexts. In the highest and presumably most conservative registers involving news and academic writings, the opposite is true: human subjects paired with human objects show higher rates of non-normative enclisis. While the rates of enclisis are typically lower in the higher register across the board, this difference related to animacy suggests a difference in the grammar of highly monitored language from that of more natural or naturalistic language use. In oral registers, we find a larger difference in the percentage of enclisis found between human and nonhuman objects than is found in other registers. Although not statistically significant due to low token counts, the relatively higher enclisis rates with nonhuman
objects compared with human ones based on subject animacy is suggestive of a stronger relative animacy effect in speech than in writing.
Table 27. Object placement by register according to subject and object animacy. Highlighted in gray are the cells with the higher rate of non-normative enclisis by subject and object animacy. Significantly different pairings by register: ACADEMIC/NEWS - first and second person subject, human object x third person nonhuman subject, human object: $\chi^2=4.79$, df=1, p<0.05; third person human subject, human object x third person nonhuman subject, human object: $\chi^2=8.89$, df=1, p<0.01; FICTION - first and second person subject, human object x third person nonhuman subject, human object: $\chi^2=14.4$, df=1, p<0.001; first and second person subject, nonhuman object x third person nonhuman subject, nonhuman object: $\chi^2=5.59$, df=1, p<0.05; third person human subject, nonhuman object x third person nonhuman subject, nonhuman object: $\chi^2=9.72$, df=1, p<0.01; third person human subject, human object x third person nonhuman subject, human object: $\chi^2=18.0$, df=1, p<0.001; ORAL INTERVIEWS - first and second person subject, nonhuman object x third person nonhuman subject, nonhuman object: $\chi^2=6.52$, df=1, p<0.05.

Data on the effect of animacy in object placement in Spanish is quite limited, but some cross-linguistic trends can be inferred. That is, Myhill (1988) suggests that lower animacy
objects paired with higher animacy subjects result in more postverbal (or *conservative*) placement in multi-verb constructions in Spanish. A similar trend is found in EP (cf. Table 24), such that more postverbal (or *innovative*) placement is found in triggered contexts in EP under the same animacy conditions. In essence, prototypical subjects follow the conservative pattern in Spanish and the innovative pattern in EP. This is schematized in (47):

(47) Spanish (Myhill 1988): high animacy subject + low animacy object = more enclisis

EP [triggered]: high animacy subject + any object = more enclisis

However, as has been demonstrated in Tables 25-27, the situation in EP is considerably more nuanced than suggested by the schema above, with different grammars emerging based on verbal construction type and register differences. In fact, a key difference between EP and Spanish is the fact that enclisis in the former in simple verbal constructions corresponds more closely to that of the complex verbal constructions in the latter (cf. Tables 25-26), while the complex verb phrases in EP do not display the same sort of animacy effect as found in Spanish. However, given the lack of detail offered in Myhill’s (1988) analysis, it is likely that Spanish also shows greater nuance with respect to relative animacy, which certainly warrants further investigation.

Beyond animacy effects, mood plays an important role in the placement of third person direct object pronouns as compared with other personal object pronouns. Table 28 below shows the rates of proclisis and enclisis with respect to finiteness (or construction type) and mood.
Table 28. Rate of clitic placements by finiteness of the lexical verb and mood of the finite form. Chi-square results indicate no significant differences between indicative and subjunctive forms within each construction type.

<table>
<thead>
<tr>
<th></th>
<th>Finite Lexical Verbs (single-verb predicates)</th>
<th>Nonfinite Lexical Verbs (multi-verb predicates)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indicative Subjunctive</td>
<td>Indicative Subjunctive</td>
</tr>
<tr>
<td>Proclitic</td>
<td>510/542 72/73</td>
<td>62/352 4/33</td>
</tr>
<tr>
<td>Enclitic</td>
<td>32/542 (6%) 1/73 (1%)</td>
<td>290/352 (82%) 29/33 (88%)</td>
</tr>
<tr>
<td>Total</td>
<td>542/1000 (54%) 73/1000 (7%)</td>
<td>352/1000 (35%) 33/1000 (3%)</td>
</tr>
</tbody>
</table>

The verbal construction clearly has a much larger impact on clitic placement than the mood of the verb. This is quite similar to the corresponding results presented for personal pronouns in Table 6, which show a significant difference in enclisis rates for single-verb predicates depending on the mood. Another difference is the relatively higher rate of enclisis in the presence of subjunctive for third person direct objects, which diverges from the trend established by the personal pronoun data showing slightly less enclisis in the presence of subjunctive mood. It appears to be the case that, in the presence of multi-verb predicates, subjunctive mood promotes the use of non-normative enclisis for third person direct object clitics and reduces the use for other object forms.

Structural priming also plays a role in clitic placement for third person direct object pronouns. Table 29 shows the differences based on the prior clitic form and the distance back in discourse. When the prime or prior clitic is comprised of an enclitic of the same form as the target token, a high rate of enclisis is observed at all distances back in discourse. When, however, the prime is an enclitic of a different form, a much lower rate of target enclisis is observed. In fact, the difference in form of the prior enclitic
corresponds with similarly lower rates of target enclisis when the prior clitic is a proclitic. Thus, the data presented in Table 29 suggest that enclitic primes of the same form as the target are stronger primes of non-normative enclisis than other clitic primes, with statistically significant differences found in primes that are between 1 and 4 clauses back from the target.

<table>
<thead>
<tr>
<th></th>
<th>Enclitic (same)</th>
<th>Enclitic (different)</th>
<th>Proclitic (same)</th>
<th>Proclitic (different)</th>
<th>No clitic available in excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4 clauses</td>
<td>55% (28/51)</td>
<td>37% (105/281)</td>
<td>39% (23/59)</td>
<td>31% (71/227)</td>
<td>—</td>
</tr>
<tr>
<td>back</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-7 clauses</td>
<td>60% (3/5)</td>
<td>43% (29/67)</td>
<td>33% (2/6)</td>
<td>35% (30/86)</td>
<td>—</td>
</tr>
<tr>
<td>back</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8+ clauses</td>
<td>50% (1/2)</td>
<td>31% (15/49)</td>
<td>0% (0/0)</td>
<td>23% (9/40)</td>
<td>28% (36/127)</td>
</tr>
<tr>
<td>back</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 29. Rate of enclisis by the prior clitic form and distance back to the prior clitic in discourse for third person direct object target forms. Boxes are placed around statistically significant rates of enclisis (p<0.05) using chi-square tests. The differences by clitic form and placement for 5-7 and 8+ clauses back are not statistically significant, largely due to very low token counts for some cells. However, if prior enclitics and prior proclitics are binned as two rather than four groups, then the 5-7 clauses back show a significant difference of enclisis priming based on the placement of the prior clitic: $\chi^2=7.20$, df=1, p<0.01.

Although referential distance and topic persistence measures were not selected in the regression analysis, these warrant further investigation to determine whether topicality affects clitic object placement in EP, as it has been shown to in Mexican Spanish. T-test results indicate no significant difference in average combined referential distance measures between proclitic and enclitic tokens ($t = 0.5396$, df = 729.047, p-value = 0.5897). The same lack of significant difference is also found for the average combined topic persistence measures ($t = -0.5668$, df = 723.465, p-value = 0.5711). To ensure statistical rigor, chi-square tests were also performed on the data as collapsed in the tables.
below. Again, significant differences based on the RD and TP measures were not found, suggesting that topicality as operationalized by these scores has little or no effect on object clitic placement in triggered contexts in EP.

Table 30. Percentages of clitic placement based on Combined Referential Distance measures (= RD + BRD). A higher score indicates greater distance between the target clitics and the prior and next mention of the same referent, reflecting lower topicality. Chi-square tests between the different score categories do not reveal significant differences based on this combined measure.

<table>
<thead>
<tr>
<th>Clitic Type</th>
<th>1-3 clauses</th>
<th>4-7 clauses</th>
<th>8-10 clauses</th>
<th>11-13 clauses</th>
<th>14+ clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>67% (221/331)</td>
<td>62% (122/198)</td>
<td>62% (23/37)</td>
<td>65% (261/402)</td>
<td>66% (21/32)</td>
</tr>
<tr>
<td>Enclitic</td>
<td>33% (110/331)</td>
<td>38% (76/198)</td>
<td>38% (14/37)</td>
<td>35% (141/402)</td>
<td>34% (11/32)</td>
</tr>
</tbody>
</table>

Table 31. Percentages of clitic placements based on Combined Topic Persistence measures (= TP + BTP). A higher score indicates more mentions of the target clitic’s referent in prior and following clauses, reflecting greater topicality. Chi-square tests between the different score categories do not reveal significant differences based on this combined measure.

<table>
<thead>
<tr>
<th>Clitic Type</th>
<th>1-3 references</th>
<th>4-6 references</th>
<th>7+ references</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic</td>
<td>63% (331/522)</td>
<td>66% (212/320)</td>
<td>66% (105/158)</td>
</tr>
<tr>
<td>Enclitic</td>
<td>37% (191/522)</td>
<td>34% (108/320)</td>
<td>34% (53/158)</td>
</tr>
</tbody>
</table>

Not only does topicality as measured by RD and TP have no bearing on clitic placement, but other predictors that are also expected to correlate with clitic placement appear to have a lesser effect on third person anaphoric DO placement. Verbal frequency, for instance, is not as strongly correlated with the placement of these pronouns as for the placement of other object pronouns in EP in the presence of complex verbal constructions. Figures 12 and 13 show greater dispersion of enclisis rates based on the
frequency of the finite verb in multi-verb predicates and the frequency of the finite verb plus an infinitive in these same constructions. These figures can be compared with Figures 8 and 9, respectively. While low verbal frequency is correlated with categorical enclisis with third person DOs, there does not appear to be the same direct correlation between verbal frequency and the rates of enclisis that we find with the other object pronouns.

![Plot of Enclisis in Triggered Contexts by Verbal Frequency: 3rd Person Anaphoric DOs](image)

Figure 12. Rate of third person DO enclisis by the frequency of the finite verb form in multi-verb (modal, movement, and progressive) predicates. Multiple R-squared = 0.08833.
Figure 13. Rate of third person DO enclisis by the frequency of the finite verb form + infinitive in multi-verb (modal, movement, and progressive) predicates. Multiple R-squared = 0.09448; this measure is a slightly better fit than that of simple verbal frequency in Figure 12.

The final piece of the analysis for the third person direct object pronouns is the conditional inference tree. The conditional inference tree for the full dataset of third person DOs is shown below in Figure 14.
The conditional inference tree provides confirmation of the results from the mixed effects regression analysis with respect to the factor with the strongest effect on the variation, namely the construction type. Modal verbs, along with progressive and movement verbs, display quite a high rate of enclisis in the triggered contexts, suggestive of less cohesion between the two verbs involved. This is shown to be correlated with verbal frequency for the personal pronouns in section 4.3, and we saw above that the degree to which the verb phrase is analyzed as a single unit is less relevant for these anaphoric direct objects. Instead, modals verbs in general—regardless of tense, person and number of the verb form, or verbal frequency—strongly favor enclisis for these pronouns, suggesting a different grammar at play for third person direct objects than for other personal pronouns. Within the category of simple and perfect verb constructions, enclisis is nearly absent for third person subjects. Among highly animate first and second person subjects, there is a
divide in the rate of enclisis between oral and written sources, with nearly 40% enclisis found in speech and a considerably lower rate in written texts. Thus, the relative animacy effect illustrated in Table 24 is largely promulgated by speech in the presence of a single verbal host to the clitic, while written sources display much less enclisis even in the presence of these first and second person subjects, as seen in Tables 25-27. This kind of divide between written and oral sources is suggestive of a change in progress toward greater enclisis usage for first and second person subjects with third person DOs, which takes hold in speech before it does in more conservative modes. Separating the data by oral and written modes illuminates the differences in the presumed new grammar and the older, more conservative grammar.

Figure 15. Conditional inference tree for third person direct objects in written EP data.
In the written registers, only the distinction between simple and complex verbal constructions significantly affects the clitic placement. Interestingly, this fact is not reflected in grammars, which maintain that enclisis is required in triggered contexts regardless of the verbal construction. In oral registers, as well as in quoted speech in news and fictional sources, the grammar is considerably more complex.

Figure 16. Conditional inference tree for third person direct objects in oral and quoted speech data.

The simple-modal distinction is revealed as the most important factor in spoken data as well, but here we find the explicit emergence of the relative animacy effect. First and second person subjects paired with nonhuman objects are found with an elevated rate of enclisis in the presence of simple verbal constructions.
4.5 **SUMMARY**

The following factors have been shown to condition clitic object placement in European Portuguese:

| Construction type (complex vs. simple) | ✓ | ✓ |
| Document type or written vs. oral | ✓ | ✓ |
| Subject animacy and/or relative subject-object animacy | ✓ | ✓ |
| Structural priming: prior clitic form, placement, & distance back in discourse | ✓ |
| Verbal frequency | ✓ |
| Verbal mood (indicative vs. subjunctive) | ✓ |
| Verb tense | ✓ |
| Object function (reflexive-DO-IO) | ✓ | NA |

Table 32. Summary of the factors conditioning the variation of object clitic placement in European Portuguese. Factors not included in this table were not found to condition the placement of either set of clitic objects.

Table 32 provides the basic list of independent variables found to condition object clitic placement in EP for personal objects and third person direct objects in triggered contexts. The directionality of these effects is summarized as follows:

- For both personal object pronouns and the third person direct objects, complex predicates are a strong predictor of non-normative enclisis in triggered contexts.
Simple predicates, in contrast, show much lower rates of non-normative behavior.

- Oral language favors enclisis in triggered contexts, while more formal styles and higher registers disfavor enclisis for both object pronoun types. This is especially true for simple predicates.

- First person subjects favor enclisis in triggered contexts for both kinds of objects considered. With third person direct objects, an effect of relative animacy is observed: the most prototypical nonhuman objects in conjunction with prototypical and highly animate subjects show the most non-normative enclisis.

- Priming effects are observed only for third person direct object pronouns, with a prior enclitic priming a target enclitic.

- Verbal frequency is negatively correlated with non-normative enclisis for personal pronouns: lower frequency governing verbs in complex predicates show near categorical non-normative enclisis in triggered contexts, while higher frequency governing verbs show lower rates of enclisis. A similar correlation can be seen for third person direct objects, but the effect is much weaker due to the overall stronger effect of construction type for the third person accusative forms.

- The presence of subjunctive mood correlates with increased normative behavior, especially in the presence of simple predicates. The indicative mood allows for greater variation and, accordingly, more enclisis in triggered environments.

- Past tense facilitates enclisis usage in complex predicates and disfavors enclisis usage in simple predicates.

- Accusative and reflexive objects show more non-normative enclisis than dative
objects.

Further explanation and discussion of these effects are provided earlier in this chapter and in Chapter 6.
CHAPTER 5. VARIABLE CLITIC PLACEMENT IN BP

In this chapter, I present the data analysis for Brazilian Portuguese, including general distributions of the data, the statistical analyses, and the effects of verbal frequency.

5.1 Data

As explained in Chapter 3, the BP data includes only personal object pronouns me, te, nos, lhe, and lhes collected from the Corpus do Português (Davies & Ferreira 2006-). This decision was made because BP speakers rarely use third person anaphoric direct objects in natural speech, generally preferring null objects for inanimates and tonic pronouns for animates for these forms (cf. Schwenter 2013a, Schwenter 2014). While third person lhe and lhes are also relatively rare as third person indirect object forms, these forms are included in order to determine whether the grammar treats them differently than the first and second person clitics that are still productively used in modern BP. As with the EP data, tokens of these clitic forms were extracted following proclisis triggers que, talvez, and não, with clitics occurring within a three word distance from the trigger due to the unavailability of tokens beyond this distance threshold. Because BP is a generalized proclitic variety, with little variation in clitic placement found in simple verbal constructions except within very high registers as a reflex of stylistic choices, only complex verbal constructions were extracted. Thus, the verbal constructions included have been limited to the modal, movement, and progressive forms
that involve an auxiliary or modal-like governing verb followed by a infinitive.

Tokens were coded for the following fixed effects: the trigger itself (*que, talvez, or *não*), subject expression (*present or absent*), tense (*present, past, or future, coded by function rather than form*), mood (*indicative or subjunctive*), person and number of the verb (*1s, 1p, 2s, 2p, 3s, or 3p*), pronoun (*me, te, nos, lhe, lhes*), pronoun type (*direct object, indirect object, or reflexive pronoun*), subject animacy, object animacy, construction type (*modal, ‘movement’, or progressive*), mode (*interview, fiction, news, or academic writing*), governing verb frequency as defined within the corpus by verb lemma, priming effects (number of clauses back to the prior clitic and whether the prior clitic is pre- or postverbal), and year of the document (ranging from 1901 to 2000). Random effects of document and verb were also coded, and because the lexical verb is included as a random effect, the frequency of the lexical verb is excluded from the regression analysis.⁶⁸

Three clitic positions were included in the token extraction process, as follows:

(48) a. CL=V[+finite] V[-finite]

b. V[+finite]  CL=V[-finite]

c. V[+finite]  V[-finite]=CL

---

⁶⁸ Lexical verb frequency is included in the random forests in Figures 17 and 18. The extremely low ranking of the variable as a fixed effect indicates relative unimportance and lack of correlation with the clitic placement options considered. The low correlation between lexical verb frequency and clitic placement motivates its exclusion as an independent factor and the inclusion of lexical verb as a random effect.
In (48a), we have a case of proclisis, with the clitic attaching to the finite auxiliary or modal verb form, while (48b) shows proclisis to the lexical or main verb. (48c) reflects a case of enclisis to the infinitival lexical verb form. For the results and analysis in the sections that follow, (48a) will be referred to as *triggered proclisis*, (48b) will be referred to as *untriggered proclisis*, and (48c) will be referred to as *enclisis*. All tokens available in the corpus for all three placements in the triggered contexts following *que*, *não*, and *talvez* were extracted, with exclusions made according to the following criteria:

(49) Exclusions

a. Negative concord intervened between the two verbs:
   i. …eu também não tinha nada, então, *não podia nunca me imaginar* com AIDS.

b. Adverbs or postverbal subjects that could themselves act as clitic-attracting triggers intervened between the two verbs:
   i. Vejo *que pode até lhe faltar* certezas, mas não regras.
   
   ii. …*não poderá este fazer-lhe* alicerce ao pé sem prestar caução àquele…

c. The clitic functioned as the object of the finite verb and the subject of the infinitive verb:
   i. …*não me deixou* terminar o paralelo que pretendo esboçar!

d. An impersonal or passive *se* was included in the triggered context:
   i. Estava tão suja que *não se podia ver-lhe* as feições ou dar-lhe a idade…

The breakdown of the data by placement is as follows:

179
As expected, the proclisis options are considerably more common than enclisis in the triggered contexts. In fact, 60% of the data involve cases of proclisis to the lexical verb—that is, clitic placement between the two verbs—which has been reported as the most common object clitic placement in BP (cf. Cunha & Cintra 2002, Perini 2002, Perini 2010, Simões 2006, Galves, Ribeiro & Moraes 2005). The generalization suggesting that BP clitics are placed before the lexical verb is so accepted, in fact, that there has been very little scientific inquiry to confirm or challenge it (Perini 2002). The studies that have been conducted fail to separate triggered contexts from unmarked ones, such that Davies (1997) and Simões (2006) present results that are representative of the system at large without considering contexts that may show very different syntactic patterns. Given Perini’s (2002) observation that the EP clitic placement rules are included as part of formal Brazilian education, the question about the extent to which BP speakers share the EP grammar with respect to clitic placement is highly relevant. Furthermore, Perini (2002) argues that clitics in BP cannot be placed postverbally ((V) V=CL) following triggers such as que and não, while other contexts freely allow for pre- or postverbal placement, and Thomas (1969) suggests that BP requires proclisis in the presence of such triggers. Cunha & Cintra (2002), on the other hand, note that BP prefers clitic placement

<table>
<thead>
<tr>
<th>Clitic Position</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic (CL=V V)</td>
<td>194</td>
<td>24%</td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>485</td>
<td>60%</td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>131</td>
<td>16%</td>
</tr>
</tbody>
</table>

Table 33. Distribution of BP data by clitic position.
prior to the main verb (i.e. proclisis) even in the presence of proclisis triggers, and
galves, ribeiro & moraes (2005) even argue that proclisis triggers do not influence clitic
placement at all in BP. These observations about clitic placement in BP are schematized
below:

(50) Generalizations about clitic placement in BP

   a. Clitics may be placed as proclitics or enclitics when no trigger is present (Perini
      2002).
   b. Untriggered proclisis (V CL=V) is most common in BP (Cunha & Cintra 2002,
   c. Untriggered proclisis (V CL=V) is most common in BP even when a trigger is
   d. Triggered contexts do not allow for enclisis ((V) V CL) in BP (Perini 2002).
   e. Triggered contexts require triggered proclisis (CL=V V) in BP (Thomas 1969).

With these conflicting reports in mind, triggered contexts must be considered separately
from untriggered ones in BP in order to fully understand the constraints in the grammar.

Looking at the data by trigger word shows a general trend followed by que and
não, with much lower token numbers available for talvez:
The increased rate of the proclisis (V CL=V) pattern for *talvez* should not be considered indicative of statistically significant differences. Because of the low token counts for *talvez* across the data set, it is likely a reflection of the particular data available in the corpus rather than a larger pattern to be interpreted. The similarities in distributions across *que* and *não*, however, are suggestive of the general trend in the language: proclisis to the lexical verb (V CL=V) is by far the most common pattern, even in these triggered contexts (cf. Cunha & Cintra 2002), followed by the more extreme proclisis (CL=V V) that linguists including Perini (2002) prescribe for placement in the presence of the trigger. The relatively low rate of enclisis reflects that seen in the EP data. However, all tokens available in the corpus are considered in this BP analysis, in contrast with the reduced number of proclisis tokens by using a number randomizer in EP. This difference in methodology might suggest that triggered contexts actually have more enclisis in BP than in EP. If we compare only complex predicates across the two languages—since the BP data is limited to these complex predicates—we find that this is, in fact, not the case. The overall rate of enclisis of personal pronouns in the presence of complex predicates in triggered contexts in EP is 73% (Table 11), whereas a rate of 16% enclisis is observed for complex predicates in BP (Table 33).
The statistical analyses follow the same general pattern as found in Chapter 4 for EP. First, some basic distributional patterns are discussed. Then, random forests are presented for both CL=V V and V V=CL patterns. The decision to run the statistical tests for both prescribed proclisis to the auxiliary and proscribed enclisis to the lexical verb depends on the assumption that the unmarked clitic placement option for most speakers of BP involves what is referred to in this chapter as untriggered proclisis, or proclisis to the lexical verb (V CL=V). The overall distribution of data collected from the *Corpus do Português* (Davies & Ferreira 2006-) shown in Table 33 demonstrates a strong preference for V CL=V patterning in these triggered contexts; as a result, the cases of truly triggered proclisis (CL=V V) and enclisis (V V=CL) have been interpreted to reflect a divergence from this unmarked pattern. In essence, then, the questions that are asked for the BP data are the same as for those for the EP data: what factors contribute to the atypical placement of a clitic object in triggered contexts, in what way do these factors influence the placement, and how do the factors interact with each other?

### 5.1.1 Distributions and statistical analyses

Looking at the data by source document presents a strikingly different pattern than is seen in the EP data. While the rate of proclisis to the lexical verb is high across document types, the fact that the lowest rate of untriggered proclisis is found in fictional documents suggests stylistic usage of the more normative (CL=V V) and less normative (V V=CL) patterns.
Table 35. Clitic placement in BP by document type. The subsets of older, contemporary, and all fictional data are highlighted in gray.

<table>
<thead>
<tr>
<th>Oral Interviews</th>
<th>Fiction (all data)</th>
<th>Fiction (pre-1990)</th>
<th>Fiction (post-1990)</th>
<th>News/Academic Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic (CL=V V)</td>
<td>8/111 (7%)</td>
<td>168/578 (29%)</td>
<td>154/420 (37%)</td>
<td>14/158 (9%)</td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>94/111 (85%)</td>
<td>300/578 (52%)</td>
<td>174/420 (41%)</td>
<td>126/158 (60%)</td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>9/111 (8%)</td>
<td>110/578 (19%)</td>
<td>92/420 (22%)</td>
<td>18/158 (11%)</td>
</tr>
<tr>
<td>Total</td>
<td>111/810 (14%)</td>
<td>578/810 (71%)</td>
<td>[420/810 (52%)]</td>
<td>[158/810 (20%)]</td>
</tr>
</tbody>
</table>

Focusing on the literary documents only, a change in progress becomes apparent in the comparison between the three middle columns. Given that all data prior to the year 1990 fall into the fiction category, it was determined that a more accurate division to compare across document type would be to consider the more recent post-1990 documents separately. As we can see in Table 35, these contemporary fictional documents display roughly the same breakdown of clitics by position as is found in the other more contemporary oral and written sources, while the older pre-1990 documents show a stark difference in placement patterns. This suggests a decrease in the conditioning power of proclisis triggers in modern BP, as well as a general decrease in enclisis within the most modern iteration of the language. The data above bring into question Davies’ (1997) assertion that more clitic climbing is found in modern EP and ‘formal’ BP, since the least clitic climbing is present in colloquial BP. Among triggered contexts, Chapter 4 offered evidence that the least ‘clitic climbing’ (or the most enclisis) in modern EP is found in multi-verb predicates, and Table 35 above shows colloquial BP to favor untriggered proclisis and more formal registers to have a division in clitic placement based on the source year within the 20th century.
The resulting random forest for the conditioning of the triggered proclisis result (CL=V V) supports the interpretation that proclisis triggers are losing their power of attraction in BP:

The random forest reveals that the strongest predictor of CL=V V placement in BP is the year of the document, which ranges from 1901 to 2000. As mentioned above, all source documents prior to 1990 are literary texts, and due to gaps in the data, this category was binned as a categorical factor with levels at pre-1990 and post-1990. Pronominal function as direct object, indirect object, or reflexive pronoun follows document year in its strength of correlation and will be discussed in more detail in §5.2. After the function of the pronoun, mode—or written, oral, or quoted speech in text—is the next most correlated with this placement.
The distribution of data presented in Table 36 corroborates the interpretation of change in progress toward V CL=V in triggered contexts. Since written texts tend to follow more conservative grammars and speech is the entry point for more innovative patterns, the very low rate of triggered proclisis (CL=V V) in oral language is expected to pattern with the low rates seen in the most modern written texts from Table 35. Meanwhile, the highest rate of CL=V V ordering seen in the written texts is largely a reflex of the older documents from the fictional genre, as well as the typically more conservative high register used in news and academic sources.

Because mode (Table 36) and document year (Table 35) are largely collinear, only document year is included in the regression models due to its stronger correlation with CL=V V placement. Furthermore, the frequency of the auxiliary or modal verb is more strongly correlated with this placement than the frequency of the lexical verb. Because of this, and because the lexical verb frequency is another way to measure the random effect of verb, lexical verb frequency is excluded from the analysis. Finally, the pronoun and type of pronoun factors also overlap in certain ways, since, for example, the first and second person *me, te,* and *nos* forms can function as direct objects, indirect

<table>
<thead>
<tr>
<th></th>
<th>Oral</th>
<th>Quoted speech in text</th>
<th>Written</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic (CL=V V)</td>
<td>8/111 (7%)</td>
<td>50/288 (17%)</td>
<td>136/411 (33%)</td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>94/111 (85%)</td>
<td>184/288 (64%)</td>
<td>207/411 (50%)</td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>9 /111 (8%)</td>
<td>54 /288 (19%)</td>
<td>68/411 (17%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>111/810 (14%)</strong></td>
<td><strong>288/810 (36%)</strong></td>
<td><strong>411/810 (51%)</strong></td>
</tr>
</tbody>
</table>

Table 36. Clitic placement by speech mode in BP.
objects, or reflexive pronouns, while *lhe* and *lhes* largely reflect indirect objects\(^{69}\) and cannot be reflexive in nature. Since the function of the pronoun (\(\text{TypeofPron}_\)) is shown to be more correlated with clitic placement than the pronominal form (\(\text{Pronoun}_\)) in the random forest above, only the function is included in the regression analysis.

Furthermore, since object animacy is largely tied to the object’s form and function, object animacy is also excluded from the regression analysis. That is, nearly all objects are animate in this dataset because third person DOs were purposefully excluded, and indirect objects and reflexive pronouns nearly always index animate entities. In fact, only 18 of the 810 tokens reflect nonhuman object referents.

The random forest for enclitic placement is quite similar to the one for triggered proclisis:

\[\text{Figure 18. Random forest showing the independent correlation of variables for enclisis (V V CL) in BP.}\]

\(^{69}\) Dialectally in BP, *lhe* and *lhes* can be used as direct objects. In the cases where they are used as such in the present dataset, the coding for pronoun type matches the function as DO rather than the form.
Once again, the high ranking of document year suggests a change in progress away from enclisis and toward generalized V CL=V, as demonstrated in Table 35. Furthermore, this similarity in the two random forests points to the generalization of proclisis in BP in triggered contexts, which matches with Cunha & Cintra’s (2002) evaluation. This will be explored further as the results of the regression analyses become apparent. As with the conditioning factors for CL=V V order, the ranking presented in Figure 18 for V V=CL evinces a stronger correlation for mode than document type and for modal verb frequency than for lexical verb frequency. However, unlike the random forest for proclisis, the form of the pronoun appears to be more strongly correlated with enclisis than the pronoun’s syntactic function, suggesting a constructional effect for enclisis that does not exist for triggered proclisis. Accordingly, the more correlated factors will be included in the regression analysis for this ordering, to the exclusion of the others.

5.2 Multivariate logistic regression

In this section, I consider the results for the logistic regression analyses. Section 5.2.1 is dedicated to the results for triggered proclisis (CL=V V), while section Section 5.2.2 includes results for enclisis (V V=CL). The effects of priming are also analyzed in this latter section.

5.2.1 CL=V V

The variables mentioned above were introduced in the step() function in R to determine the ordering of variables to be added into the statistical models. Mixed effects models were then built, and an ANOVA was used for model comparison. Based on the distribution shown in Table 35, the division of source year into binary categories of pre-
and post-1990 was included in the models rather than a continuous factor involving the entire range of source years. The resulting best model shows document year, object pronoun function, and subject animacy as the factors influencing the selection of triggered proclisis in BP. Each of these factors is discussed in detail below.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-2.1135</td>
<td>0.3315</td>
<td>-6.375</td>
<td>1.83e-10***</td>
<td></td>
</tr>
<tr>
<td>post-1990</td>
<td>-1.3584</td>
<td>0.2651</td>
<td>-5.124</td>
<td>&lt; 0.001 ***</td>
<td>40/390 (10%)</td>
</tr>
<tr>
<td>pre-1990</td>
<td>1.3584</td>
<td>0.2651</td>
<td>5.123</td>
<td>&lt; 0.001 ***</td>
<td>154/420 (37%)</td>
</tr>
</tbody>
</table>

Table 37. Regression results for triggered proclisis (CL=V V) in BP by document year. Sum contrasts were used to compare the estimates for each level with the average for the factor as a whole. Negative estimates suggest a disfavoring effect of the factor, while positive estimates suggest a favoring effect.

As expected based on the distributions shown in Table 35, data from before 1990 favors this conservative clitic placement whereby the trigger attracts the clitic away from the verb with which it associates. While only 37% of the tokens from before 1990 show this pattern, this number reflects an increase from the baseline of 24% in the entire data set. This suggests that writers from before this time period either largely still had the triggered contexts in their mental grammars as requiring proclisis or, for stylistic reasons, tried to emulate patterns from a foreign (i.e. EP) grammar or from a grammar in effect before their time.

With respect to the function of the object forms, the regression analysis shows that indirect objects favor this clitic position, while direct object pronouns and reflexives cluster together and disfavor preverbal placement. This pattern matches that found in EP for personal object pronouns (cf. Figure 3), in that indirect objects show higher rates of
normative proclisis in triggered environments. Given that prototypical indirect objects are human, and the personal pronouns extracted for this study index mostly human referents, the patterns of clitic placement may be a reflex of the animacy effect described below.

Table 38. Regression results for triggered proclisis (CL=V V) in BP by clitic function. Sum contrasts were used to compare the estimates for each level with the average for the factor as a whole. Negative estimates mark a disfavoring effect of the factor, while positive estimates indicate a favoring effect. The lack of significant effects for reflexive pronouns is partially due to low token counts.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-2.1135</td>
<td>0.3315</td>
<td>-6.375</td>
<td>1.83e-10 ***</td>
<td></td>
</tr>
<tr>
<td>direct object</td>
<td>-0.4718</td>
<td>0.2030</td>
<td>-2.324</td>
<td>&lt; 0.05 *</td>
<td>39/235 (17%)</td>
</tr>
<tr>
<td>indirect object</td>
<td>0.8482</td>
<td>0.1755</td>
<td>4.834</td>
<td>&lt; 0.001 ***</td>
<td>130/371 (35%)</td>
</tr>
<tr>
<td>reflexive pronoun</td>
<td>-0.3764</td>
<td>0.2203</td>
<td>-1.709</td>
<td>not significant</td>
<td>25/294 (12%)</td>
</tr>
</tbody>
</table>

Subject animacy also emerges as a significant predictor of triggered proclisis, with nonhuman subjects favoring this clitic placement pattern.

Table 39. Regression results for triggered proclisis (CL=V V) in BP by subject animacy. Sum contrasts were used to compare the estimates for each level with the average for the factor as a whole.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-2.1135</td>
<td>0.3315</td>
<td>-6.375</td>
<td>1.83e-10 ***</td>
<td></td>
</tr>
<tr>
<td>human</td>
<td>-0.6616</td>
<td>0.1612</td>
<td>-4.105</td>
<td>&lt; 0.001 ***</td>
<td>132/644 (20%)</td>
</tr>
<tr>
<td>nonhuman</td>
<td>0.6616</td>
<td>0.1612</td>
<td>4.104</td>
<td>&lt; 0.001 ***</td>
<td>62/166 (37%)</td>
</tr>
</tbody>
</table>

The results in Table 39 show an elevated rate of triggered proclisis with nonhuman subjects. Based on the marginal numbers shown in the last column and the detailed breakdown in Table 40, it becomes clear that subject animacy is, in fact, a very important
factor in the selection of triggered proclisis, with the inverse correlation becoming apparent in the presence of the other proclisis pattern. That is, while the overall rate of triggered proclisis in BP is 24%, an increase to 37% is seen in the presence of non-canonical, nonhuman subjects. Similarly, the overall 60% rate of untriggered proclisis in the data shows a sizable decrease to 48% in the presence of nonhuman subjects. In contrast, it appears to play little to no role in the selection of enclisis in BP.

<table>
<thead>
<tr>
<th></th>
<th>human</th>
<th>nonhuman</th>
<th>Total N (% total N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic (CL=V V)</td>
<td>132/644 (20%)</td>
<td>62/166 (37%)</td>
<td>194/810 (24%)</td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>406/644 (63%)</td>
<td>79/166 (48%)</td>
<td>485/810 (60%)</td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>106/644 (16%)</td>
<td>25/166 (15%)</td>
<td>131/810 (16%)</td>
</tr>
</tbody>
</table>

Table 40. Clitic placement by subject animacy in BP. Totals are calculated by columns.

<table>
<thead>
<tr>
<th></th>
<th>human</th>
<th>nonhuman</th>
<th>Total N (% total N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic (CL=V V)</td>
<td>132/194 (68%)</td>
<td>62/194 (32%)</td>
<td></td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>406/485 (84%)</td>
<td>79/485 (16%)</td>
<td></td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>106/131 (81%)</td>
<td>25/131 (19%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>644/810 (80%)</td>
<td>166/810 (20%)</td>
<td></td>
</tr>
</tbody>
</table>

Table 41. Clitic placement by subject animacy in BP, with totals calculated across by row. Chi-square analysis shows that the triggered proclisis (CL=V V) pattern by subject animacy differs significantly from what is seen in the other clitic placement configurations. CL=V V x all others: $\chi^2=20.6$, df = 1, p<0.001.

Table 41 shows clitic placement by subject animacy, illustrating how triggered proclisis differs from untriggered proclisis and enclisis across subject type. For the enclitic placement, over 80% of the tokens involve human subjects, with less than 20% involving nonhuman subjects. It is expected that a much higher percentage of the tokens will
involve human subjects because they are the canonical subjects, and the similarities between untriggered proclisis and enclisis are indicative of this expected trend. The divergence seen in the top row for triggered proclisis, however, suggests that the selection of this clitic placement is strongly influenced by subject animacy, with double or nearly double the rate of triggered proclisis observed with nonhuman subjects. This effect is illustrated in Figure 19 below, which shows the percentage of nonhuman subjects observed for each placement possibility.

![Figure 19. Percentage of nonhuman subjects by clitic placement in BP.](image)

Subject animacy is clearly a much better predictor of this pattern than is subject person and number. Table 42 shows that the rate of triggered proclisis increases as the subject
becomes more distanced from the speaker, and, like subject animacy, this pattern is inversely correlated with the rate of the other proclisis pattern (V CL=V): triggered proclisis usage increases incrementally as the subject becomes more distanced from the speaker, the rate of untriggered proclisis decreases. Again, this factor appears not to affect enclitic selection.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic (CL=V V)</td>
<td>52/311 (17%)</td>
<td>18/76 (24%)</td>
<td>124/423 (29%)</td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>216/311 (69%)</td>
<td>44/76 (58%)</td>
<td>225/423 (53%)</td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>43/311 (14%)</td>
<td>14/76 (18%)</td>
<td>74/423 (17%)</td>
</tr>
<tr>
<td>Total</td>
<td>311/810 (38%)</td>
<td>76/810 (9%)</td>
<td>423/810 (52%)</td>
</tr>
</tbody>
</table>

Table 42. Clitic placement by subject person in BP.

The slightly elevated number for third person subjects seen in the last column in Table 42 is indicative of the fact that third person subjects are the only ones that can refer to nonhuman entities. Given that non-canonical (nonhuman) subjects and canonical (human) indirect objects both show higher rates of triggered proclisis, a relative animacy effect can be inferred. Following the investigation of animacy effects for anaphoric third person direct objects in EP (Table 24), a closer look at the relative animacy of the subject and object forms in BP reveals a clear pattern: while nonhuman subjects in general correspond to objects placed preverbally (CL=V V) at higher rates, the rate is considerably increased for nonhuman objects. However, token counts are low for nonhuman objects, which is expected due to the subset of objects that are included in the analysis.
Table 43. Object clitic placement in BP by subject and object animacy.

<table>
<thead>
<tr>
<th>Subject Animacy</th>
<th>human</th>
<th>nonhuman</th>
<th>human</th>
<th>nonhuman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object Animacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proclitic (CL=V V)</td>
<td>125 (20%)</td>
<td>7 (64%)</td>
<td>56 (35%)</td>
<td>6 (86%)</td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>406 (64%)</td>
<td>0</td>
<td>78 (49%)</td>
<td>1 (14%)</td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>102 (16%)</td>
<td>4 (36%)</td>
<td>25 (16%)</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>633</td>
<td>11</td>
<td>159</td>
<td>7</td>
</tr>
</tbody>
</table>

The pattern shown in Table 43 with higher rates of triggered proclisis with nonhuman subjects aligns with the EP data, which shows decreased enclisis and a corresponding increase in proclisis (CL=V (V)) with these nonhuman subjects (cf. Table 24). In this respect, the grammars of the two varieties appear to match, a fact which indicates that the BP usage of triggered proclisis is related to similarities in the normative grammar shared between the two varieties. However, an important difference between the two datasets lies in the construction types considered. In this respect, the multi-verb predicates do not align cross-linguistically. The BP data, which includes only complex verb phrases, indicate more triggered proclisis with nonhuman subjects, while the EP data in Tables 25 and 26 demonstrate that the increase in triggered proclisis in the presence of nonhuman subjects is found only with simple verbs. Multi-verb predicates that have nonhuman subjects, in contrast, do not bring about an increase in proclisis in EP, as is found in BP. So while Table 43 aligns with the generalities of Table 24, the deviations in the datasets point to important underlying differences in the grammars of BP and EP regarding animacy of the subject.
5.2.2 V V=CL

The logistic regression analysis for enclitics in BP includes the variables from the random forest in Figure 18 with the exception of collinear independent variables. A step() function in R was run to determine the ordering of variables to be added into the models, and models were built with the inclusion of the random effects of verb and document and were then compared using an ANOVA. The resulting best model shows that the prior clitic form and the source year influence the selection of postverbal placement.

Table 44. Regression results for enclisis (V V=CL) in BP by document year. Sum contrasts were used to compare the estimates for each level with the average for the factor as a whole. Negative estimates indicate a disfavoring effect of the factor, while positive estimates point to a favoring effect.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-2.6019</td>
<td>0.2976</td>
<td>-8.744</td>
<td>&lt; 2e-16</td>
<td>***</td>
</tr>
<tr>
<td>post-1990</td>
<td>-0.5936</td>
<td>0.2150</td>
<td>-2.760</td>
<td>&lt; 0.01</td>
<td>**</td>
</tr>
<tr>
<td>pre-1990</td>
<td>0.5936</td>
<td>0.2150</td>
<td>2.760</td>
<td>&lt; 0.01</td>
<td>**</td>
</tr>
</tbody>
</table>

As with the proclisis data, Table 44 points to more enclisis in older documents. This is, once again, suggestive of increasing abandonment of this clitic placement by speakers when using personal object pronouns. Together, Tables 35, 37, and 44 show a change in progress away from proclisis induced by a trigger word and enclisis that keeps the clitic adjacent to its verbal host in favor of the innovative V CL=V placement. This generalization holds for personal object pronouns me, te, nos, lhe, and lhes in BP, while third person direct object clitics are expected to follow different trends in triggered contexts. Specifically, Simões (2006) argues that third person direct object clitics are placed postverbally in multi-verb predicates to avoid phonological conflicts. His
assertion, in conjunction with the results presented here, suggests that personal object pronouns are moving toward the exclusive use of untriggered proclisis, while the third person accusative forms o, a, os, and as are moving toward exclusive postverbal placement in all contexts. However, in view of the fact that Schwenter (2013a, 2014) finds very little in the way of third person anaphoric clitic objects in spoken BP in favor of tonic pronominal forms, it can be inferred that the ‘medial’ position (cf. Davies 1997) between the two verbs is by and large the only current productive placement of object clitics in multi-verb predicates in colloquial BP, even in the presence of trigger words.

The factors conditioning the use of these less common choices differ considerably in BP. While triggered proclisis is conditioned through the use of canonical indirect objects and the presence of non-canonical, nonhuman subjects, enclisis in triggered contexts in BP appears to be the result of priming by prior enclitics. This pattern is seen below in Table 45, with a prior enclitic favoring the postverbal placement of the target clitic. A prior proclitic, on the other hand, shows a slight but insignificant disfavoring effect on target enclisis. When no nearby prior clitic is available in the corpus data, enclisis is largely disfavored.

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>z Value</th>
<th>p-value</th>
<th>N/total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-2.6019</td>
<td>0.2976</td>
<td>-8.744</td>
<td>&lt; 2e-16 ***</td>
<td></td>
</tr>
<tr>
<td>enclitic</td>
<td>0.8420</td>
<td>0.2046</td>
<td>4.115</td>
<td>&lt; 0.001 ***</td>
<td>69/228 (30%)</td>
</tr>
<tr>
<td>proclitic</td>
<td>-0.2526</td>
<td>0.1959</td>
<td>-1.290</td>
<td>not significant</td>
<td>54/451 (12%)</td>
</tr>
<tr>
<td>not available</td>
<td>-0.5894</td>
<td>0.3004</td>
<td>-1.962</td>
<td>&lt; 0.05 *</td>
<td>8/153 (5%)</td>
</tr>
</tbody>
</table>

Table 45. Regression results for enclisis (V V=CL) in BP by prior clitic placement. Sum contrasts were used to compare the estimates for each level with the average for the factor as a whole. Negative estimates indicate a disfavoring effect of the factor, while positive estimates point to a favoring effect.
The priming effect that prior enclisis has on target forms is reminiscent of Schwenter’s (2013b) analysis of -ra and -se past subjunctive forms in three varieties of Spanish. In his data, the past subjunctive forms ending in -se make up less than 20% of the overall data, and these forms are specifically the ones that could be primed by prior usage. He also finds a large differential between the priming effect that a prior -se has on a target -se in comparison with the effect that a prior -ra form has on a target -ra form. This finding reflects patterns found cross-linguistically (Schwenter 2015): the older forms show greater persistence in discourse when primed, since a single occurrence increases the activation of a less-used form. This is also shown for clitics cross-linguistically in Schwenter (2015) and Barnes, González López & Schwenter (2014) for the priming effect for direct object placement in Asturian Spanish. These authors show a 27% increase in enclisis placement when there is a prior enclitic in discourse, compared to a weaker effect of a 13% increase in proclisis primed by a prior proclitic. Schwenter & Torres Cacoullos (2014b) find a similar increase in enclisis in Mexican Spanish when a prior enclitic is available.

Similar to the patterns found in other varieties, Table 46 below shows that there is a 29% increase in enclisis in triggered BP contexts when comparing unprimed contexts to contexts primed by the same enclitic form. Meanwhile, prior proclisis results in a high rate of untriggered proclisis (V CL=V) in these triggered contexts, but this reflects a 9% decrease in this placement from unprimed contexts. In short, the absence of any kind of prime leads to near categorical selection of this default placement, which maintains a high level of activation without priming. A general decrease in untriggered proclisis is
observed as prior clitics become available and diverge more in form from the target, with a 50% decrease from unprimed tokens to tokens with enclitic primes.

Table 46. Structural priming of clitic placement in triggered contexts in BP.

<table>
<thead>
<tr>
<th></th>
<th>Enclitic (same)</th>
<th>Enclitic (diff)</th>
<th>Proclitic (diff)</th>
<th>Proclitic (same)</th>
<th>No clitic available in excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proclitic (CL=V V)</td>
<td>12/37 (32%)</td>
<td>53/191 (28%)</td>
<td>86/297 (29%)</td>
<td>28/154 (18%)</td>
<td>15/131 (11%)</td>
</tr>
<tr>
<td>Proclitic (V CL=V)</td>
<td>12/37 (32%)</td>
<td>82/191 (43%)</td>
<td>171/297 (58%)</td>
<td>112/154 (73%)</td>
<td>108/131 (82%)</td>
</tr>
<tr>
<td>Enclitic (V V=CL)</td>
<td>13/37 (35%)</td>
<td>56/191 (29%)</td>
<td>40/297 (13%)</td>
<td>14/154 (9%)</td>
<td>8/131 (6%)</td>
</tr>
</tbody>
</table>

By looking at the combination of the prime and its distance back in discourse, the picture becomes even clearer. Prior enclitics, and particularly those closer to the target clitic, show higher rates of target enclisis; however, the differences based on distance back are not significant.

Table 47. Enclisis (V V=CL) placement in BP by prior clitic placement and distance back in discourse. Shaded boxes mark elevated rates of V V=CL placement.
Enclisis in the presence of prior proclitics or no clitic shows a considerable decrease from what can be seen following prior enclitics. This pattern is similar to what is found in EP for the priming of enclisis (Table 29) of third person direct object forms but not for the corresponding personal pronouns in EP. The pattern is markedly different for the priming of untriggered proclisis (V CL=V) in BP:

<table>
<thead>
<tr>
<th></th>
<th>Enclitic (same)</th>
<th>Enclitic (different)</th>
<th>Proclitic (different)</th>
<th>Proclitic (same)</th>
<th>No clitic available in excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3 clauses</td>
<td>28% (7/25)</td>
<td>39% (40/103)</td>
<td>50% (70/140)</td>
<td>67% (56/84)</td>
<td>100% (2/2)</td>
</tr>
<tr>
<td>4-6 clauses</td>
<td>50% (4/8)</td>
<td>42% (22/52)</td>
<td>58% (46/79)</td>
<td>73% (22/30)</td>
<td>75% (3/4)</td>
</tr>
<tr>
<td>7-9 clauses</td>
<td>25% (1/4)</td>
<td>47% (9/19)</td>
<td>66% (23/35)</td>
<td>82% (14/17)</td>
<td>81% (22/27)</td>
</tr>
<tr>
<td>10+ clauses</td>
<td>-/- (11/17)</td>
<td>65% (32/43)</td>
<td>74% (20/23)</td>
<td>87% (81/98)</td>
<td>83% (22/27)</td>
</tr>
</tbody>
</table>

Table 48. Innovative proclisis (V CL=V) placement in BP by prior clitic placement and distance back in discourse. Shaded boxes mark elevated rates of V CL=V placement by relevant prime.

Whereas priming of enclisis is less influenced by distance back in discourse to the prime, this generalization does not hold for the standard clitic placement pattern in the language. That is, primes further back in discourse increase the chances of an untriggered proclitic (V CL=V) in triggered contexts. This is seen in Table 48 in the middle three columns: as the distance back to the prior clitic increases, so does the rate of this target clitic placement. The two shaded columns show an increase in V CL=V patterns with proclitic primes and, importantly, even greater V CL=V placement when the proclitic prime is the
same form as the target. The influence of the prime’s distance back in discourse for V CL=V patterning reflects the default status of this clitic placement, especially when the prior clitic is less accessible in discourse. Thus, a prior proclitic of the same or different form can have a priming effect on the target clitic’s placement, which works in opposition to the trend toward greater default behavior as the distance between the prime and target increases.

Although verbal mood does not emerge as a significant predictor of the variation in object clitic placement in BP, the data suggest that the use of the subjunctive mood leads to more conservative behavior. The statistically significant increase in the rate of triggered proclisis (CL=V V) in the presence of governing verbs in the subjunctive reflects the conservative pattern seen in EP (cf. Table 28). While EP shows subjunctive mood to trigger near-categorical proclitic placement with simple verb phrases and a small decrease in normative proclisis in the presence of compound verb phrases, BP multi-verb predicates display an increase in normative proclisis in these multi-verb predicates. This pattern points to the strength of verbal construction type in EP, in opposition to the change in progress with conservative placements maintained by priming and animacy effects in BP.
Table 49. Clitic placement by grammatical mood of the finite verb. Chi-square analysis shows that the triggered proclisis (CL=V V) pattern by mood selection differs significantly from what is seen in the other clitic placement configurations: $\chi^2=3.89$, df = 1, p<0.05.

5.2.3 Summary

The factors conditioning the placement of pronominal clitics in BP differ depending on the particulars of the configuration of the clitic+verb sequence. They are schematized as follows:

(51) Factors conditioning clitic placement in multi-verb predicates in triggered contexts in BP

a. Triggered proclisis (CL=V V)
   i. Older source documents (pre-1990) show higher rates of this placement.
   ii. Canonically human objects (indirect objects) favor this placement.
   iii. Non-canonical subjects (nonhuman) in conjunction with nonhuman and human objects result in more of this pattern.

b. Enclisis (V V=CL)
   i. Older source documents (pre-1990) show higher rates of this placement.
   ii. Prior enclitics prime enclisis.
5.3 Frequency effects

Verb frequency was extracted from the *Corpus do Português* (Davies & Ferreira 2006-), using the data available within the BP portion of the corpus. Modal verb frequency ranks high in the random forests in Figures 17 and 18, suggesting that this measure of frequency for the auxiliary verb plays an important role in the placement of the object pronoun. Because of the uneven distribution of the frequency numbers, however, verbal frequency was necessarily excluded from the regression analysis. When considered independently of other factors, a negative correlation between frequency and enclisis emerges in BP, similar to the findings for EP (cf. Figure 8).

![Plot of Enclisis in Triggered Contexts by Verbal Frequency: BP Personal Pronouns](image)

Figure 20. Rate of enclisis by verbal frequency in triggered contexts in BP. Multiple R-squared = 0.06216.

Although the negative correlation aligns with the pattern for EP personal pronoun placement, the low R-squared value in Figure 20 points to a less good fit of the regression
line than is found in EP. In short, the negative correlation between auxiliary frequency and enclitic placement is considerably weaker BP than in EP.

For triggered proclisis, the correlation is inverted: there is a positive correlation between verbal frequency and normative pre-auxiliary clitic placement in BP, as would be expected in EP.

![Plot of Triggered Proclisis in Triggered Contexts by Verbal Frequency: BP Personal Pronouns](image)

**Figure 21.** Rate of triggered proclisis (CL=V V) by verbal frequency in triggered contexts in BP. Multiple R-squared = 0.189.

The higher R-squared value in Figure 21 clarifies that the positive correlation between triggered proclisis and verbal frequency is stronger than the negative correlation between enclisis and verbal frequency found in Figure 20. The primary cause for this difference in R-squared values appears to lie in the lowest frequency verbs: for triggered proclisis, they cluster in the bottom lefthand corner of the figure due to the combination of low frequency and lack of proclisis placement. Meanwhile, these same low frequency verbs
have a more disparate distribution in Figure 20: some of the lowest frequency verbs cluster together with no occurrences postverbally or with all tokens in postverbal position, while others show significant variation with a marked amount of enclisis. The differences on display in the figures above suggest two different grammars in conflict. First, the phonological attraction of the trigger word in BP is relatively weak, especially when the governing verb is low frequency; such low frequency verbs also typically contribute more to the semantics of the verb phrase than true modals (dever, poder) or auxiliaries (estar, ir). Thus, low frequency governing verbs strongly resist triggered proclisis in BP, a pattern which is also found in EP, showing innovative behavior in the presence of low frequency predicates. BP speakers are thus left with two options that conserve the placement of the clitic with its syntactic host: enclisis (V V=CL) and untriggered proclisis (V CL=V). Low frequency verbs that require a preposition before the lexical verb, such as deixar de, parar de, continuar a, ter que, and others, show variation between these two options; however, there are no tokens of clitics in preverbal triggered proclisis position with these verbs in the present data set. This pattern echoes Andrade’s (2010c) findings for verbs that require particles in EP: these verbs tend to disfavor clitic climbing in this variety, preferring instead adjacency to their lexical hosts. In both varieties, then, the presence of a preposition or particle between the two verbs results in an increased likelihood that the clitic will remain attached to the infinitival verbal host as either a proclitic (V Prep CL=V) or an enclitic (V Prep V=CL).

The second part of the grammar in conflict reflects the fact that the more modal- and auxiliary-like governing verbs (dever, querer, saber, poder, ir, estar, pretender, vir) are the ones most likely to be found with significant variation between the triggered
proclisis placement and enclisis. Because of their lesser semantic content and the frequency with which they are followed by an infinitival verb form, the placement of the clitic at the beginning of the verb phrase and close to the trigger poses no risk of misinterpretation or processing difficulty for the hearer.

(52) a. Eu disse que te posso dar o presente.
   ‘I told you that I can give you the present.’

   b. *Eu te posso.
   ‘I can you.’

(53) a. ?Eu disse que te desejo dar o presente.
   ‘I told you that I wish to give you the present.’

   b. Eu te desejo. 70
   ‘I desire you.’

Example (52a) with modal poder ‘to be able to’ shows triggered proclisis. As suggested above, preverbal placement with the modal alone, as in (52b), is ungrammatical, so considerable variation in clitic placement is available for two-verb sequences involving poder without a corresponding increase in processing load to determine the associated verb. Lower frequency verbs with greater semantic content that can be transitive or ditransitive as a standalone form, as seen in (53a-b), likely require more processing

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70 Desejar functions here as a transitive verb, but it can also be used as a ditransitive verb with the object clitic functioning as the indirect object.
power to interpret which verb should receive the association of the clitic. That is, (53a) is unlikely in BP because the clitic could associate with either the governing or the lexical verb. The generally greater cohesion between the most modal- and auxiliary-like governing verbs encourages placement of the clitic prior to the main verb in triggered contexts. These high frequency verbs “maintain their irregularities” (Bybee 2010:66) by allowing for preverbal placement in a way that lower frequency verbs do not.

Accordingly, the greatest variation between enclisis and triggered proclisis is found with these higher frequency verb forms, while lower frequency governing verbs are more likely to show either 0% or 100% in one of the two positions. Vir, with its relatively high rate of triggered proclisis, is subject to a separate explanation, in that the interpretation of the clitic association is less fixed than with the other modal and auxiliary verbs. That is, a phrase like não me veio falar can be interpreted as either ‘he did not come to me to say’ or ‘he did not come to say to me’, such that the intended verbal host remains ambiguous.

The analysis put forth in Chapter 4 for the placement of EP clitics in triggered contexts is based on the correlation between verbal frequency and gradient analogical clitic placement patterns. In other words, the less frequent governing verbs lead to greater analogical behavior, promulgating a change toward generalized enclisis in EP. In this variety, enclisis is the standard pattern found outside of triggered contexts, so the move toward generalized enclisis (cf. Vigário & Frota 1998) and away from the normative preverbal placement in complex verbal constructions is steered by the less common and less cohesive verbal units. Since speakers have less experience with lower frequency governing verbs and associated objects, they are more likely to use analogical extension (cf. Bybee 2010) in their selection of clitic placement, resulting in the default placement
in language. This also applies in BP: lower frequency verbs show practically no triggered proclisis. The strong preference to attach the clitic to the associated lexical verb, either as a proclitic in the default position, or in the more marked placement as an enclitic, supports this theory. The strength of the negative correlation in EP (cf. Figure 8, R-squared = 0.914) compared to the correlations in Figures 20 and 21 for BP is suggestive of differences in the relative importance of frequency and other factors in these two varieties. In EP, frequency clearly has a very strong effect on what appears to be a productive pattern in the modern instantiation of the language; in BP, the correlations are considerably weaker, suggesting that other factors are contributing more to the selection of unproductive clitic placements. The conditional inference trees that follow in Figures 23-25 show that the use of unprimed enclisis is a historical relic in BP, while primed enclitics are most susceptible to the effects of verbal frequency. The fact that both varieties show a negative correlation between enclisis in triggered contexts and verbal frequency points toward either historical similarities in the grammars and the continued imposition of EP norms in formal BP education (cf. Perini 2002, Galves, Moraes & Ribeiro 2005, Simões 2006), despite the current trends that show that the languages have moved in different directions with respect to standard and triggered clitic placements. 

As mentioned above, the opposing patterns for triggered proclisis and enclisis with respect to verbal frequency matches the EP grammar, a fact which supports the hypothesis that these two placement patterns are relics of a time when EP and BP grammars aligned with respect to the rules governing object clitic placement following trigger words. Further evidence in the data shows that both of these patterns are found more commonly prior to 1990, while the untriggered proclisis (V CL=V) pattern clearly
comes to dominate in contemporary usage in spite of the triggers. In fact, this default placement in BP in triggered contexts shows practically no correlation with verbal frequency.

Figure 22. Rate of untriggered proclisis (V CL=V) by verbal frequency in triggered contexts in BP. Multiple R-squared = 0.00582.

The very small R-squared value of 0.00582 confirms the lack of correlation between untriggered proclisis and frequency of the governing verb. Placement of personal object clitics between the two verbs—or rather, prior to the associated lexical verb—is by far the most common and expected position in BP, even in triggered environments. Figure 22 confirms that the grammar does not use frequency cues to govern the placement of clitics in this position.
5.4 Interactions

The data distributions and statistical analyses presented in the prior sections support the correlation between individual conditioning factors and the clitic placement options in BP. However, interactions between various factors are to be expected in this kind of study, and the inclusion of conditional inference trees provides strong evidence for both the directionality of the effect for each level and the interactions between the various factors and levels. The figures below show the interactions for enclisis (Figure 23) and triggered proclisis (Figure 24) in BP.

Figure 23. Conditional inference tree for enclisis in BP.
Figure 24. Conditional inference tree for triggered proclisis in BP.

The primary factor affecting enclisis selection in BP is prior clitic form. In other words, a prior enclitic, regardless of whether it is the same or different form as the target, primes target enclisis in triggered contexts. Within this set of primed enclitics, modal or auxiliary verb frequency is correlated with clitic placement. Specifically, lower frequency governing verbs show significantly higher rates of enclisis than do higher frequency governing verbs when primed by a prior clitic. The configuration of this bifurcation suggests that the split seen in Figure 20 between low frequency governing verbs showing either 0% or 100% enclisis is related to the placement of the prior clitic. In contrast, when there is not nearby prior clitic, or when the prior clitic is a proclitic, much lower rates of enclisis are observed. While already uncommon even in older texts, the branching on the right side of the conditional inference tree in Figure 23 demonstrates that unprimed enclitics are becoming increasingly rare in contemporary (post-1990) Brazilian
Portuguese.

The interactions conditioning the use of triggered proclisis are, as expected, rather different from those found for enclisis. The first bifurcation in Figure 24, however, shows a generalized correspondence to the change in progress suggested by the enclisis data: older sources have more triggered proclisis than do more recent ones. Within these older source documents, dative objects are more likely to be placed before the governing verb in triggered contexts. The EP data in Chapter 4, as well as Andrade’s (2010c) results for EP, are quite similar in this respect, with more proclisis (or clitic climbing, in the case of Andrade’s data) in the presence of dative objects. In the conservative and modern grammars in BP, indirect object personal pronouns—or prototypically human objects—are more likely to receive normative clitic placement following proclisis triggers. This appears to be related to the relative animacy effect seen in section 5.2.1, namely that non-canonical, nonhuman subjects show a strong tendency to maintain conservative placement. When a prototypical dative object outranks the subject in animacy, the result involves higher rates of conservative proclisis. Human direct objects, on the other hand, are less commonly found in this conservative placement, showing a preference for the default untriggered proclitic placement. Not only is this pattern reminiscent of results for EP in Chapter 4, but it also reflects Myhill’s (1988) relative animacy effect in Spanish. However, the trend for indirect object placement in triggered preverbal position in BP could also be related to the fact that almost all lhe and lhes occurrences fall into this category, and these pronouns are both archaic and stylistically very formal. When present, these older, more conservative clitics are more commonly placed in a more conservative placement, i.e. as triggered proclitics. The more common modern usage for
these dative pronouns involves the use of *a* or *para* ‘to/for’ followed by a tonic pronominal form.

In the case of more recent source documents seen in the left branch of Figure 24, we find a priming effect that differs drastically from that seen for enclisis. In essence, a prior clitic that shares the same form as the target, regardless of whether the prime is placed pre- or postverbally, rarely correlates with triggered proclisis. However, a prior clitic that differs in form from the target elicits higher rates of triggered proclisis, especially in the presence of a nonhuman subject. This pattern suggests an *anti-priming* effect for triggered proclisis: same-form primes do not trigger proclisis, while different-form primes allow for proclisis and, in fact, promote it in the presence of non-canonical subjects. I interpret this to mean that triggered proclisis (CL=V V) is not primed by prior clitics, supporting the interpretation of the data seen in Table 46. And, within the subset of contemporary BP tokens, the presence of nonhuman subjects in conjunction with these highly animate objects increases the rate of triggered proclisis. Given that the vast majority of clitics in the present dataset index human referents (cf. Table 43), this division between human and nonhuman subjects presents another piece of evidence in favor of the relative animacy effect for triggered proclisis. In essence, human referents are important and often more topical (taking into considering operationalized measures of RD and TP) in discourse than nonhuman ones (cf. Myhill 2005). When an object is more typically topical, as are subjects and dative objects, the actual animacy of these forms appears to influence the placement of the clitic in triggered contexts in BP.

Although untriggered proclisis is the norm in BP, I constructed a conditional inference tree to show under what conditions this placement is most and least preferred.
As with the triggered proclisis placement, the year of the source document prompts the first level of branching, with more recent sources showing higher rates of this untriggered proclisis than older sources. Among these older sources found in the branch to the right, the highly animate first and second person clitics receive this placement about half of the time. Meanwhile, the lhe and lhes clitics—which almost exclusively reflect indirect objects—display higher rates of this proclisis placement in written texts involving quoted speech. Texts involving more typical prose, on the other hand, elicit much lower rates of this clitic placement. This particular pattern adds to the evidence that untriggered proclisis in triggered contexts reflects a change in progress: these third person clitic forms, which are relatively uncommon in informal registers and styles in contemporary BP, are expressed in this position at nearly the same rate as is found with the more productive first and second person clitics only when these third person clitics are expressed in quoted or dialogue (i.e. speech-like) styles. Meanwhile, older texts upholding more formal, prescriptive styles are less likely to contain this innovative pattern for these object clitics. The fact that higher rates of V CL=V placement is found in older BP source documents when speech is quoted or imitated suggests that the change in progress toward this placement, as expected, was already underway before it managed to take hold in higher registers.
In the left branch of the conditional inference tree above for V CL=V placement of the object pronouns, the contemporary data show that a priming effect influences the selection of this placement. Namely, if the prior clitic is the same in form and preverbal placement as the target, or if there is no nearby clitic, this placement is selected at a near categorical rate. However, when the prior clitic is either postverbal or a proclitic of a different form, an animacy effect is observed. For these clitics that are not primed by a prior clitic of the same form or that result from the default placement, human subjects, in contrast with nonhuman subjects, are significantly more likely to correspond to personal object clitics in this placement. Accordingly, these largely human objects are most likely to be placed as proclitics to the lexical verb when not primed and in the presence of canonical subject forms. In modern BP, nonhuman subjects—that is, non-canonical subjects—in the presence of largely animate objects are the most resistant to the
generalized change toward proclisis to the lexical verb.

5.5 SUMMARY

The following chart summarizes the factors influencing the selection of the different personal pronoun clitic placements in multi-verb sequences in BP:

<table>
<thead>
<tr>
<th>Factor</th>
<th>V V=CL (enclisis)</th>
<th>CL=V V (triggered proclisis)</th>
<th>V C=V (untriggered proclisis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary/modal verb frequency</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Source year</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Priming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subject animacy</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Object function (reflexive-DO-IO)</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Object pronoun (me, te, nos, lhe, lhes)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 50. Summary of the factors conditioning the placement of personal object pronouns in BP.

Table 50 shows the factors conditioning each of the placement options in Brazilian Portuguese. The effects of each of these factors are summarized as follows:

- Frequency of the governing verb influences placement of clitics in the older and less-used placement options, i.e. as enclitics or triggered proclitics. That is, low frequency governing verbs strongly disfavor triggered proclisis placement, showing instead higher rates of this ‘normative’ placement with higher frequency verbs.
Enclitics, though subject to very strong priming effects, display a negative correlation with respect to frequency: low frequency governing verbs are more likely to result in enclisis than higher frequency governing verbs.

- Older documents (pre-1990) favor both enclisis and triggered proclisis, while newer source documents (post-1990) strongly favor untriggered proclisis. This suggests a largely completed change toward object clitic placement immediately prior to the lexical verb, even in so-called triggered contexts.

- Enclitics in BP are primed by prior enclitics, especially in the presence of low frequency governing verbs. The interaction between frequency and priming suggests that these low frequency governing verbs receive either categorical enclisis or categorical untriggered proclisis, depending on the presence of a prior enclitic in discourse.

- Like in the EP data, nonhuman subjects favor the most conservative placement of triggered proclisis, while human subjects are loci of change. In BP, these prototypical human subjects result in the placement found elsewhere in the system, i.e. untriggered proclisis, or the placement of the clitic immediately before the lexical verb with which it semantically associates.

- Similarly to EP, dative clitics are found at higher rates than other kinds of clitics in the more conservative triggered proclitic placement.

- A higher rate of untriggered proclisis is observed with the productive first and second person clitic objects me, te, and nos, particularly in older source documents, suggesting that these clitics were the first to be analogized into this placement.

Further analysis of these effects is provided earlier in this chapter and in Chapter 6.
CHAPTER 6. DISCUSSION

In this chapter, I discuss the results presented in Chapters 4 and 5 for European and Brazilian Portuguese.

6.1 CLITICS IN EP & BP

As detailed in Chapter 2, clitics have been described as an intermediate class of elements that reflect grammaticalization processes. They represent a unique stage of coalescence that has developed from a prior lexical stage but has not achieved affixal status (cf. Hopper & Traugott 2003, Haspelmath 2011). In Portuguese, these units cannot appear in varied sentential positions like true lexical items, but they have greater freedom of host selection than is usually expected of affixes. In EP, clitics have been described as more grammaticalized than clitics in other Romance varieties (Luís & Sadler 2003, Galves & Sandalo 2012), meaning that they have become even more affix-like and largely lost the little freedom of host selection previously available. This fact has led to a perceived increase in enclisis in the presence of proclisis-inducing triggers in this variety. A similar pattern is not expected in BP, since clitics in BP do not appear to be in the process of becoming more affixal. Instead, these clitics in BP have greater freedom of placement within the verb phrase in triggered contexts, while receiving analogical placement prior to the lexical verb, as is seen with simple predicates throughout the grammar.
This change in progress toward more generalized enclisis has been proposed for EP (Galves, Moraes & Ribeiro 2005, Galves & Sandalo 2012), and Vigário & Frota (1998) alone have offered predictions about where in the language this change is most expected. However, no systematic study has offered detailed information about the environments in which it has entered the language and become the norm. A similar change in progress has not been noted in the literature for BP, but there is a paucity of research on clitic placement in BP due to the greater theoretical interest of EP clitics. Accordingly, limited reported data on the placement patterns in BP is available. In the present work, I aim to resolve this disparity in the research and to provide data-driven evidence for the factors governing the variation in clitic placement in contexts containing proclisis triggers in both EP and BP.

Prior work on the placement of object pronouns in EP and BP typically focuses primarily on a single variety of Portuguese and provides anecdotal evidence from few examples. With respect to triggered environments, the majority of the work on EP holds that preverbal placement is required when trigger words like que, talvez, and não are placed prior to the verb phrase. The clitic placement rules in EP have been defined in the following way:

\[(54)\] Generalizations about clitic placement in EP


c. Proclisis is simply preferred in triggered contexts (Cunha & Cintra 2002).

d. If a pause or adverb is present prior to the lexical verb with which the clitic associates when a trigger is also present, enclisis is found (Cunha & Cintra 2002, Mateus et al. 2003).

While EP shows a strong preference for enclisis as the unmarked placement of clitics, BP has a clitic system that generalizes proclisis (cf. Simões 2006; Cunha & Cintra 2002). Clitic placement in BP has been described as follows, reproduced from (50) in Chapter 5:

(55) Generalizations about clitic placement in BP

a. Clitics may be placed as proclitics or enclitics when no trigger is present (Perini 2002).


c. Untriggered proclisis (V CL=V) is most common in BP even when a trigger is present (Cunha & Cintra 2002, Galves, Moraes & Ribeiro 2005).

d. Triggered contexts do not allow for enclisis ((V) V=CL) in BP (Perini 2002).
e. Triggered contexts require triggered proclisis (CL=V V) in BP (Thomas 1969).

The data analysis in Chapters 4 and 5 were designed to evaluate the claims made regarding placement in triggered contexts by these grammars and prior linguistic studies. For the three triggered contexts considered in EP, Cunha & Cintra’s (2002) description that proclisis is preferred aligns best with the data presented in Chapter 4. In fact, of the available data in the Corpus, the vast majority of the tokens involve preverbal clitic placement in the presence of the trigger words. However, the difference in the rate of proclisis selection in the presence of simple and complex predicates is not captured in their characterization, nor are the differences between anaphoric third person direct objects and personal object pronoun.

With respect to BP clitics in complex predicates, triggered contexts do not require preverbal, triggered proclisis, as described by some authors. In fact, Cunha & Cintra (2002), along with Galves, Moraes & Ribeiro (2005), once again provide the characterization that most closely reflects the data analyzed in Chapter 5: triggered contexts, like contexts lacking a trigger, show a strong preference for clitic placement immediately before the lexical verb (V CL=V). Galves, Moraes & Ribeiro (2005) argue that enclisis is a marginal option in BP, reflecting a conflict between the naturally-acquired grammar and a formal grammar learned later. Accordingly, the favoring of third person accusative clitics in this position reflects the status of third person DO clitics as late acquisitions that have largely been replaced by other realizations. Although the data in Chapter 5 offer evidence for low rates of usage of enclisis in BP, both the kinds of
The sections that follow describe in detail the primary findings from Chapters 4 and 5, connect these findings to prior work on clitic placement in Portuguese, and offer explanations for and theoretical implications of these findings.

6.2 Cross-linguistic influences on the variation

In both varieties of Portuguese, the dependent variable consists of the placement of pronominal object clitics in preverbal and postverbal placements following the three trigger words *que*, *talvez*, and *não*. These three triggers were chosen as representative of proclisis triggers in the languages, and, by Vigário & Frota’s (1998) classification, they include both Type I (*talvez*, *não*) and Type II (*que*) triggers of varying syllable lengths.

Vigário & Frota (1998) predict that the Type II subclass of strong function words (including *que* ‘that’) will be affected first by the loss of phonological host status, resulting in increased rates of generalized enclisis. Only then will Type I strong function words, such as *talvez* ‘perhaps’ and *não* ‘not’, begin to lose their phonological host status. This prediction derives from the fact that the Type I group represents phonologically
heavier words that carry lexical stress (cf. (33)), thus making them more resistant to a change in status. While this prediction could not be systematically tested in the EP data due to methodological choices related to the vast amount of available data for the *que* and *não* triggers, Vigário & Frota’s (1998) prediction that Type I strong function words do not ever allow for enclisis when the trigger and verb are adjacent, as in (37) in §2.4.2.1, does not appear to be true for the EP or BP data. Nonetheless, the low rate of enclisis found following *talvez* (13% enclisis for personal pronouns, and near categorical proclisis for third person direct objects) provides preliminary evidence that the Type I strong function words are indeed more resistant to a change in phonological status and thus are less likely to display large amounts of the generalized enclisis pattern found throughout the system. However, this interpretation should be taken cautiously, given that the *talvez* trigger also reflects a locus of near-categorical subjunctive use, and the presence of subjunctive itself appears correlated with normative clitic placement (Table 6, Table 28). To further test the interpretation posited above, the study of an additional multi-syllabic Type I strong function word that does not normatively take subjunctive, such as a wh-word (*quando* ‘when’, *como* ‘how’) or adverb (*também* ‘also’), would be necessary.

In BP, on the other hand, all available tokens were coded, making the phonological status of the trigger words available for analysis. The highest rates of triggered proclisis and enclisis are found with the *que* trigger, and the highest rates of untriggered proclisis are found following *talvez* (Table 34). This last fact suggests that, if a phonological requirement for triggered proclisis had been in effect in the BP grammar, the Type I strong function word *talvez* is among the first to receive the generalized analogical placement, contrary to the prediction for the EP system. Given the small
number of tokens following *talvez*, such an interpretation should be approached with caution. With respect to triggered proclisis, the high rate seen with the Type II strong function word *que* is also entirely unexpected from Vigário & Frota’s (1998) predictions for EP. And, as we have seen, the maintenance of enclisis as an option for personal object pronouns derives from the syntactic priming of this placement. Thus, I conclude that the phonological attraction between triggers and clitics is not robust, nor is the change toward the generalization of untriggered proclisis in BP a result of the phonological weakening of Vigário & Frota’s (1998) proposed strong function word categories.

Some similarities between EP and BP emerge with respect to the trigger words: the greatest variation is found with the subordinating conjunction *que*, and the least variation is found with adverbial *talvez*. This aligns with Costa, Fiéis & Lobo’s (2015) assessment that subordinate complement clauses show variation in both child and adult grammars. However, their claim that adverbial clauses result in more variation in clitic placement in EP since speakers must learn which adverbial clauses trigger proclisis is not supported by the data for *talvez*. In EP, this trigger shows very low rates of non-normative enclisis, and in BP it appears in the presence of categorical proclisis. The negation contexts, which require categorical proclisis according to Costa, Fiéis & Lobo (2015), show considerable variation in clitic placement in both finite and infinitive clauses in EP and BP. Additionally, these authors find through experimental results that differences in the timing of the acquisition of clitic placement in EP depends on the kind of trigger involved and the generalizability within the grammar. However, these findings seem to result from the normative influence of schooling and fail to account for the level of variation found in spontaneous adult usage.
As the factors governing clitic placement are given further consideration in the text that follows, the differences in the contexts studied in each variety of Portuguese must be detailed. Table 51 schematizes the nature of the dependent variable considered in each variety of Portuguese to highlight the primary methodological differences that influence the results.

<table>
<thead>
<tr>
<th></th>
<th>BP</th>
<th>EP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal construction types</td>
<td>complex V V sequences</td>
<td>simple, single V predicates complex V V sequences</td>
</tr>
<tr>
<td>Pronoun types</td>
<td>personal pronouns (me, te, nos, lhe, lhes)</td>
<td>personal pronouns (me, te, nos, lhe, lhes) third person anaphoric DOs (o, a, os, as)</td>
</tr>
<tr>
<td>Clitic placements</td>
<td>CL=V V (proclisis)</td>
<td>CL=V (V) (proclisis)</td>
</tr>
<tr>
<td></td>
<td>V CL=V (proclisis)</td>
<td>(V) V=CL (enclisis)</td>
</tr>
<tr>
<td></td>
<td>V V=CL (enclisis)</td>
<td></td>
</tr>
</tbody>
</table>

Table 51. Differences in contexts considered in the present study of BP and EP object clitic placement.

Although BP allows for enclitics in simple predicates, this placement is rarely used except in the highest registers. Given that unmarked contexts lacking a proclisis trigger strongly disfavor enclisis in the presence of a single verb, only complex verb phrases are included. This differs from the more complete set of contexts in EP, which includes both simple and complex verbal sequences, since this variety displays enclisis to both in unmarked contexts.

With respect to the pronouns themselves, two separate statistical analyses involving different pronominal sets are put forth in Chapter 4 for EP. The third person
accusative objects are expected to display systematic differences in placement due to their anaphoric rather than indexical nature (cf. Schwenter & Torres Cacoullos 2014a, Schwenter & Torres Cacoullos 2014b) and also due to prior claims about speaker preferences related to the phonological status of these forms that lack consonant onsets (Simões 2006). The BP objects under consideration are limited to the productive usage including personal object pronouns (me, te, nos), as well as the largely archaic lhe and lhes forms. The third person accusative objects are excluded from the BP study, since these objects are rarely used in naturally occurring speech data in favor of tonic or null realizations (cf. Schwenter & Silva 2003, Schwenter & Silva 2010, Schwenter 2014).

Finally, three clitic placements are included in the analysis for the BP data, which I have labeled as triggered proclisis, untriggered proclisis, and enclisis. Since untriggered proclisis is the norm in unmarked contexts (Cunha & Cintra 2002, Perini 2002, Perini 2010, Simões 2006), triggered proclisis has been described as ‘obligatory’ following trigger words (Thomas 1969), and enclisis remains an option in unmarked contexts (Perini 2002), all three contexts are included in Chapter 5 to determine the constraints that govern these placements in triggered environments in BP. In contrast, only triggered proclisis and enclisis are considered for EP. The third option, which would place the object as a ‘climbed’ enclitic to the finite governing verb in complex predicates, has been excluded from the analysis because this placement is exceedingly rare in the presence of proclisis triggers in the Corpus do Português.

Although the results are not completely comparable between the EP and BP data because of the differences in the nature of the dependent variable, numerous similarities emerge in the results. Table 52 lists the variables found to play a significant role in the
placement of object pronouns under the conditions described above for each variety. The details and directionality of the results are compared in detail in the subsections to follow.

<table>
<thead>
<tr>
<th>Construction type (complex vs. simple)</th>
<th>BP</th>
<th>EP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V V=CL (enclisis)</td>
<td>CL=V V (triggered proclisis)</td>
</tr>
<tr>
<td>Document type or written vs. oral</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Verb tense</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

| Verbal mood (indicative vs. subjunctive) | ✓  | ✓  | ✓  |
| Auxiliary/modal verb frequency          | ✓  | ✓  | ✓  |
| Subject animacy/relative animacy        | ✓  | ✓  | ✓  | ✓  |
| Object function (reflexive-DO-IO)       | ✓  | ✓  | NA |
| Priming                                | ✓  | ✓  | ✓  |

| Source year                            | ✓  | ✓  | ✓  |

| Object pronoun (me, te, nos, lhe, lhes) | ✓  |

Table 52. Factors affecting clitic placement in BP and EP by object pronoun type and clitic placement.
6.2.1 Factors affecting only EP clitic placement

Three of the factors analyzed affect clitic placement in EP only: construction type, document type (written vs. oral), and verb tense. Of these, construction type and document type are important for both the personal object pronouns and the anaphoric direct object clitics. In speech, EP speakers show greater preference for enclisis in triggered environments, particularly when there are simple predicates. That is, document type or language mode is especially important in EP for simple predicates, showing less influence on the selection of enclisis in complex predicates, and this result is constant across EP personal pronouns and anaphoric direct objects (see Figures 6 and 14).

However, for the third person direct objects in the presence of simple predicates, the distinction between oral and written modes is only seen with first and second person subjects. In essence, highly animate subjects correlate with a higher rate of enclisis of third person DOs in oral modes in the presence of simple predicates. These findings are novel in light of prior work on clitic placement in EP. Andrade (2010b, 2010c), who looks at clitic climbing in complex predicates in EP, finds a higher rate of clitic climbing in informal speech than in more formal spoken and written registers. This contrasts with Davies (1997), who shows that more clitic climbing is found in more conservative or formal registers, and less clitic climbing is found in less conservative registers. These two sets of conflicting results are not entirely comparable with the results presented in Chapter 4 because of three issues: 1) the differences in types of predicates considered; 2) Andrade’s and Davies’ inclusion of cases of clitic climbing resulting in either proclisis (CL=V V) or enclisis (V=CL V); and 3) the lack of distinction made between triggered and untriggered contexts in both Andrade’s and Davies’ work. However, my results
complement Andrade’s (2010b, 2010c) and Davies’ (1997) findings: by including only triggered environments, multiple predicate types, and exclusively fully preposed proclisis and postposed enclisis, the results from Chapter 4 provide a more fine-grained approach to the role of language mode and register in the placement of clitics in triggered contexts in EP. While climbed clitics resulting in enclisis of a governing verb may be more common in informal oral styles in EP (Andrade 2010b, Andrade 2010c), enclisis to the finite lexical verb increases in speech in triggered contexts (Chapter 4). My results point to the generalization of enclisis in EP in less monitored speech, where complex predicates allow for placement following the lexical verb even when a proclisis trigger is present; meanwhile Andrade’s (2010c) study does not distinguish between the proclisis and enclisis results of clitic climbing or the syntactic environments in which one or the other placement option may be more prevalent. Furthermore, it may be true that clitic climbing to proclisis of a governing verb may be more common in conservative registers in modern EP—which is not entirely clear in Davies (1997)—but the patterns shown in Chapter 4 in exclusively triggered contexts point to differences by register, pronoun type as personal or anaphoric DO, and verbal construction type, as detailed below.

Written and oral data in Chapter 4 display vastly different grammars governing clitic placement, and these grammars differ in important ways based on the type of object pronouns involved. For personal pronouns, we see a correlation between the subject and clitic placement in oral registers (Figure 4); meanwhile, the written data involving the same pronouns present a much more complex grammar (Figure 5). In short, speakers choose between personal pronoun clitic placements in EP speech based on the subject. A separate grammar involving distinctions between predicate type, pronoun forms, register,
and other factors influences speaker decisions in written EP. With respect to the third person direct object forms, the grammars governing clitic placement in written and oral registers also differ. For these pronouns, it is the written register that shows the simpler grammar in triggered contexts: simple verb phrases correspond to almost no enclisis, and complex verb phrases exhibit nearly categorical enclisis (Figure 15). While verbal construction type is also important for written registers involving these third person DOs, showing the same effect of high rates of enclisis in multi-verb predicates, simple predicates have a much more complex grammar in oral modes (Figure 16).

Between the written and oral modes, we also observe diverging grammars by object pronoun type:

\[(56)\]  
EP clitic placement grammars by register/document type and personal/anaphoric pronouns  
- a. Oral registers: simpler grammar overall for personal pronouns (Figure 4)  
- b. Oral registers: more complex grammar for third person DOs (Figure 16)  
- c. Written registers: simpler grammar for third person DOs (Figure 15)  
- d. Written registers: more complex grammar for personal pronouns (Figure 5)

The simpler grammars involve a single factor governing the choice between pre- and postverbal clitic placement following trigger words, while the more complex grammars establish more intricate patterns of interactions between variables to determine the clitic placement. A complementary distribution is observed between the pronoun types by register: oral registers seem to have one factor influencing clitic placement for personal
pronouns (*me, te, nos, lhe, lhes*), and the more complex grammar is observed in the written registers for these pronominal forms; in contrast, written registers display a simpler grammar influenced by a single factor for third person accusative objects (*o, a, os, as*), in opposition to a considerably more complex grammar observed for the placement of these objects in oral registers.

The dichotomy between simple and complex predicates seen in Figure 15 for the third person DOs in written documents is suggestive of an older grammar in which the proclisis triggers have an effect on only simple predicates. That is, if a speaker is indeed using a third person accusative clitic in place of the expected null objects used for inanimate referents (Schwenter 2014), these clitics receive normative placement in the presence of simple predicates, and they maintain enclisis to their associated lexical verb in the presence of a more complex predicate type. However, the use of these pronouns in speech is presumably minimal, in favor of null expression where possible. Thus, when expressed, we see the influence of other factors on the selection: complex predicates show a high rate of non-normative enclisis regardless of other conditions, but in simple verbal constructs, canonical human subject referents paired with canonical nonhuman direct object referents (i.e. the DOs that are typically null) show a much higher rate of enclisis than any other subject-object configuration (Figure 16). Meanwhile, it is the oral speech styles (rather than the verbal construction) that show this pattern of highly animate subjects in combination with enclitics for the personal object pronouns (Figure 4). We can thus infer that third person DOs show a stronger constructional effect of generalized enclisis in complex predicates, allowing for the generalization of enclisis to enter simple predicates through canonical subject-object pairs. The personal pronouns
show generalization of enclisis in oral speech modes separately from the constructional effects seen in the written data, but the higher rate of enclisis generalization is seen using the same canonical subject condition found in the third person DO data. This is suggestive of similar but separate grammars governing the use of enclisis in normatively proclisis contexts. For the expressed third person DOs, multi-verb predicates are the loci of innovation for non-normative enclisis, with certain kinds of subject-object interactions allowing for enclisis in simple predicates. For the personal pronouns, only written environments make the division in placement in triggered contexts primarily by construction type, while oral registers allow for greater enclisis in the presence of certain kinds of subjects regardless of construction type. The patterns with respect to subject and object animacy are explored in depth later.

The personal pronouns in written modes show greater enclisis with complex predicates, but both complex and simple predicates display a highly intricate pattern of favorable and unfavorable placements (Figure 5). Thus, construction type rather than register conditions enclisis through a series of interacting constraints, while the productive grammar used by speakers in less-monitored settings is much simpler than the grammar used in highly-monitored registers. That is to say, the personal pronouns me, te, nos, lhe, and lhes are productively used in both low and high registers of language use, and the rules governing their placement in the lower registers with less monitored production are simpler. Meanwhile, the third person anaphoric direct objects o, a, os, as are less productive in speech, since they are typically omitted—at a rate of nearly 73% in BP (Schwenter 2014)—when indexing canonical pronominal referents. Thus, the rules governing their non-normative placement in speech are expected to be more complex,
since they are not widely used in this register and, when they are employed, the usage is highly prescriptive in nature.

Although construction type clearly interacts with other variables in certain registers, it is generally the case that more non-normative enclisis is observed with complex predicates than with simple ones. For the most part, the very high rate of enclisis in triggered contexts with multi-verb predicates is generalized across pronoun types and registers. Since proclisis tokens in this dataset were artificially selected through the use of a number randomizer, the fact that the vast majority of the multi-verb sequences show enclisis in triggered contexts points to these contexts as the loci for the generalization of enclisis in EP. One important difference seen in the data for personal pronouns and third person accusative pronouns is the behavior of progressive \textit{estar a + infinitive ‘to be Xing’}. This highly frequent construction exhibits categorical enclisis with the anaphoric objects, while showing a very low rate of enclisis with the personal pronouns. This reflects differences in the roles of frequency and construction type between the two pronominal sets: personal pronouns have greater variation in clitic placement with complex predicates, following a linear trajectory related to verbal frequency. Frequency plays a lesser role for the third person accusative objects; instead, the presence of an infinitive with which the clitic semantically associates is itself a very strong predictor of enclisis in triggered contexts. Thus, given that the rate of enclisis by governing verb is strongly correlated with verbal frequency for personal pronouns (to be discussed in detail in §6.2.3), the generalization of enclisis in triggered contexts (cf. Vigário & Frota 1998, Galves & Sandalo 2012) appears to be largely promulgated by the nature of the verb phrase (for all object clitics) as well as the frequency of governing verbs (in the case of
personal object pronouns).

With respect to the final factor that affects clitic placement only in EP, verb tense influences the two construction types differently for personal pronoun clitics. In complex predicates involving two verbs, past tense facilitates higher rates of non-normative enclisis. Simple, single-verb predicates, however, show a lower rate of enclisis in the past tense. This difference may be related to the fact that the governing verbs in the complex predicates are largely high frequency forms, many of which maintain irregular preterit (past) tense forms. In the presence of these irregular past tense verbs, production effort may be reduced due to automatic retrieval of the fossilized forms. Lower production effort in the morphology of the verb goes hand-in-hand with continued lower production effort in the linearization of the phrase, which maintains the placement of the clitic with its associated lexical host. The simple predicates in the past tense involve single verbs that, for the most part, are more compositional in nature—reflecting the addition of predictable morphemes—and may therefore be more likely to maintain the conservative, preverbal placement in triggered contexts. In essence, the majority of the simple predicates involve verbs that conjugate in the past tense through regular morphological concatenation processes, while complex predicates have a high rate of irregular past tense forms (e.g. poder, estar, querer, ir). Thus, the increased compositionality of the verb may be reflected in less automation of clitic placement in simple predicates, such that the enclisis found elsewhere in the system is not found under these conditions.

Finally, unlike prior studies of object clitic placement in related varieties (cf. Schwenter & Torres Cacoullos 2014a, Schwenter & Torres Cacoullos 2014b) and studies of object expression in Portuguese (cf. Schwenter 2014), discourse pragmatic factors
relating to reference do not seem to affect third person direct object clitic placement in proclisis-triggered contexts in EP. That is, all forward- and backward-looking measures, as well as the combined measures, of referential distance and topic persistence that are considered demonstrate no clear effect on clitic placement. Thus, while the questions of reference clearly play an important role in third person direct object expression in Portuguese and in third person direct object placement in Mexican Spanish, only morphosyntactic constraints related to form affect the placement of these clitics in EP.

Table 53 summarizes the findings for variables influencing the selection of enclisis in proclisis-triggered contexts for only EP, as compared with prior literature.
### Table 53. Comparison between prior studies and results in Chapter 4 for factors affecting clitic placement in only EP.

<table>
<thead>
<tr>
<th>Document type or spoken vs. written</th>
<th>Prior work</th>
<th>Chapter 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>More CC (CL=V V or V=CL V) in informal, spoken registers (Andrade 2010b, 2010c).</td>
<td>NA</td>
<td>Elevated rates of enclisis (V-CL) are found in triggered contexts in (informal) oral registers in conjunction with single-verb predicates.</td>
</tr>
<tr>
<td>More CC (CL=V V or V=CL V) in most conservative registers, least CC in least conservative registers (Davies 1997).</td>
<td></td>
<td>Written registers show less enclisis except in conjunction with complex predicates.</td>
</tr>
<tr>
<td>Construction type</td>
<td>NA</td>
<td>Oral registers show more constraints influencing enclisis selection for third person DOs in the presence of simple predicates.</td>
</tr>
<tr>
<td>All available prior studies on clitic placement in Western Romance consider exclusively multi-verb predicates (Davies 1997, Andrade 2010b, Andrade 2010c, Schwenter &amp; Torres Cacoullos 2014a, Schwenter &amp; Torres Cacoullos 2014b) or simple predicates (Barnes, González López &amp; Schwenter 2014), without accounting for possible triggered contexts separately.</td>
<td></td>
<td>Generally speaking, complex predicates show very high rates of enclisis in triggered contexts.</td>
</tr>
<tr>
<td>Verb tense</td>
<td>NA</td>
<td>Simple predicates display very low rates of enclisis in triggered contexts; some exceptions exist, with slightly elevated rates of enclisis in the presence of highly animate subjects and, in the case of third person DOs, nonhuman objects.</td>
</tr>
<tr>
<td>Past tense verbs in complex verbal constructions show increased enclisis in written registers (personal pronouns only).</td>
<td></td>
<td>Past tense in simple verb phrases with first person subjects show decreased enclisis in written registers (personal pronouns only).</td>
</tr>
</tbody>
</table>

#### 6.2.2 Factors affecting only BP clitic placement

Clitic placement in triggered contexts in BP is influenced by two factors not affecting EP.
placement. These are the source document year and the object pronoun form. With respect to the year of the document, the most recent data (post-1990), regardless of document type or register, show extremely high rates of untriggered proclisis (V CL=V)—at close to 80%—when compared to the older texts and interviews, which show greater variation between this incoming norm and the less common triggered proclisis and enclisis placements. I argue that this reflects a change in progress whereby the proclisis triggers lose their influence in this variety while the general rules governing placement simultaneously shift to proclisis to the lexical verb and away from enclisis. The older sources show a greater adherence to the prescriptive EP pattern of triggered proclisis following trigger words, especially when a dative pronoun is present (cf. Figure 24). In the case of enclisis, unprimed enclitics are found in older documents, while this placement is losing ground generally in more recent documents except when primed (cf. Figure 23). Interestingly, these results diverge from those of Galves, Moraes & Ribeiro (2005), who argue that enclisis is the result of late acquisition, since this placement is favored by the third person anaphoric clitic forms o, a, os, as.

These results provide evidence in favor of prior analyses of the multiple related changes to the object clitic system in BP. That is, it has been argued that the increase in null object expression in BP is directly correlated with the increase in generalized proclisis in this variety. Kato (1993), for example, suggests that BP is at early stage in the loss of its clitic system, whereby third person direct object clitics have been mostly replaced by null elements. She argues that this may progress into a new phase that involves the null expression of second person clitics, eventually followed by the loss of first person clitics. Accordingly, old BP and modern EP still reflect a phase in which
object clitics of all persons remain in use. Contemporary BP, in contrast, shows a large increase in null object realization from the 19th century through the second half of the 20th century, starting around the same time that the tonic pronouns become available as object forms (cf. Cyrino 1990) and null expression becomes generalized for nonhuman direct objects (Cyrino 1993). Meanwhile, as the use of null objects increases in BP, the rate of enclisis with gerunds, personal infinitives, and affirmative imperatives sharply decreases throughout the system (*ibid.*). By the 20th century, enclisis appears to be mostly restricted to the third person direct object clitic forms *o, a, os, as* (*ibid.*). Cyrino (1993) also offers data from Brazilian plays that point to a shift toward categorical proclisis in matrix clauses by the second half of the 20th century. With respect to triggered contexts, she observes a considerable decrease in the use of triggered proclisis (CL=V V) in BP that ranges from 100% triggered proclisis following trigger words in the 18th century to between 0% and 20% in the second half of the 20th century. In essence, this author finds a generalized pattern of proclisis (CL=V) in simple predicates and untriggered proclisis (V CL=V) in complex predicates in contemporary BP, regardless of the presence of proclisis triggers. The rates of enclisis and triggered proclisis presented in Chapter 5 support the patterns in Cyrino’s (1993) written data, showing a very strong preference for untriggered proclisis (V CL=V) in the most recent documents. Thus, the new data presented in Chapter 5 support Cyrino’s (1993) argument that changes in clitic placement correlate in timing with the changes in object expression in BP, which she shows to have occurred primarily in the 20th century. And, the increase in fixed untriggered proclisis in BP in the 20th century appears to correlate with the increase in explicit pronominal subject expression (including for inanimate referents) and the
availability of tonic pronouns for animate objects in this variety (cf. Schwenter 2014). These patterns are notable in that they are similar to what is found in modern French with respect to subject expression and object clitic placement: subjects must be explicit, and object clitics are placed immediately prior to the lexical or main verb with which they associate in complex predicates, as shown in (17c) and (17d). Accordingly, BP may well be on the same path whereby subject expression becomes obligatory and clitic placement becomes fixed, with the addition of tonic and null objects that are used to distinguish between categories of anaphoric third person referents. As we can see from the data in Chapter 5, however, the current maintenance of both triggered proclisis and enclisis in BP in the environments under consideration are constrained in systematic ways, and it is unlikely that these two options will disappear entirely in the near future.

The object pronoun form, which is only a factor for the incoming placement of untriggered proclisis in BP, interacts with the source document year: older documents show higher rates of this contemporary placement with first and second person clitics me, te, and nos. These pronouns are used productively in quoted speech, dialogues, and internal monologues, while lhe and lhes are somewhat archaic in their usage in BP and covary with the more common tonic pronouns following prepositions para ele(s)/ela(s). Because the third person clitics reflect conservative usage not inherent to first and second person clitics in BP, it is unsurprising that older documents display a lower rate of these forms in the generalized modern placement (V CL=V). In essence, the commonly used first and second person clitic pronouns were the first clitics to receive the generalized untriggered proclisis treatment in triggered contexts.
In addition to the clear change in progress in BP that has been explored in prior work and in Chapter 5, I have also argued for a change-in-progress interpretation of the EP results. However, the change in progress in EP is less obvious from the data in Chapter 4. The differences between the findings for BP and EP point to two distinct grammars following divergent trajectories: a) a recent 20th century change in BP toward generalized proclisis to the lexical verb, regardless of context and, presumably, predicate type, concurrent with a rise in null and tonic object expression, resulting from a change from more synthetic to more analytic grammar; and b) relatively stable variation in EP over the 20th century suggesting an ongoing, slower change in progress toward generalized enclisis in complex predicates that is disseminating first through predicates governed by lower frequency verbs. The factors discussed in the sections that follow help to motivate the continued usage of the two less productive BP clitic placements (i.e. enclisis and triggered proclisis) and the conditions under which the generalization of enclisis is spreading in EP.
<table>
<thead>
<tr>
<th>Document source year</th>
<th>Prior work</th>
<th>Chapter 5</th>
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<tbody>
<tr>
<td>Brazilian scholars have noted the loss of the clitic system in BP as it relates to the availability of null object expression in this variety (cf. Kato 1993). A generalization of proclisis (CL=V) and untriggered proclisis (V CL=V) has been observed for BP (Cyrino 1990, Cyrino 1993). The continued use of enclisis in BP is a relic of an older grammar that is presently acquired through formal education, in conjunction with the acquisition of third person direct object forms o, a, os, as (Galves, Moraes &amp; Ribeiro 2005). A change in progress has been suggested for EP in triggered contexts as the generalization of enclisis, possibly due to speech errors made by younger speakers (Vigário &amp; Frota 1998, Galves &amp; Sandalo 2012).</td>
<td>Following procisis triggers, unprimed enclitics are very uncommon in contemporary texts (pos-1990). Triggered proclisis is also much more common in older texts. In contemporary texts, triggered proclitic placement of personal pronouns is found mostly following nonhuman subjects. These facts are suggestive of a change in progress away from enclisis and triggered proclisis toward generalized V CL=V placement that is blind to proclisis triggers. The conditions for where enclisis and triggered proclisis are still found are quite specific: only when primed (enclisis) and in the presence of non-canonical subjects (triggered proclisis).</td>
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</table>

| Object pronoun form | Prior sources suggest an effect of object animacy in Spanish (cf. Myhill 1988, Schwenter & Torres Cacoullos 2014b), and related issues of topicality have been proposed for EP clitic placement (Andrade 2010c). No placement patterns have been shown for particular object pronoun forms in either of these varieties, nor have they been discussed for BP. | In older documents (pre-1990), third person lhe and lhes clitics have lower rates of the innovative untriggered proclisis V CL=V placement than first and second person pronouns in triggered contexts. A slight increase in this placement is shown for these third person clitics in quote speech that mimics conversational norms. |

Table 54. Comparison between prior studies and results in Chapter 5 for factors affecting clitic placement in only BP.
6.2.3 Factors influencing clitic placement in EP and BP

As illustrated in Table 52, numerous factors influence clitic placement in both BP and EP. These include verbal mood, verbal frequency, subject animacy or relative animacy of subject and object referents, object function, and object priming. Each of these is discussed in detail in the sections that follow.

6.2.3.1 Mood

In both BP and EP, verbal mood plays a role in the placement of object clitics in triggered contexts. While verbal mood in BP does not emerge as a statistically significant predictor of the variation, a pattern limited to triggered proclisis is observed: slightly higher rates of triggered proclisis are found in clauses involving subjunctive mood (cf. Table 49). EP clitics, on the other hand, show a considerably more robust pattern with respect to verb phrases involving indicative and subjunctive. Tables 6 and 28 reveal a clear pattern: in the presence of simple, single-verb phrases, triggered contexts in EP show categorical or near-categorical normative proclisis with both moods, though extremely low rates of enclisis are observed with subjunctive. This pattern holds for both personal object pronouns and third person anaphoric direct objects (cf. Table 6 and 28, respectively). Interestingly, verbal mood does not appear to significantly affect placement of clitic objects in multi-verb predicates in EP, although the directionality of the effect for personal pronouns in EP in complex predicates (i.e. more normative proclisis) is exactly the same as is found for these complex predicates in BP. Thus, two patterns emerge: a) across all clitic types in EP, proclisis triggers are robust in drawing the clitic to preverbal position in simple verb phrases involving subjunctive mood, and b) in BP and EP, rates of non-normative enclisis in triggered environments are minimally affected by verbal
mood in complex predicates, generally showing slightly more normative proclisis in the
presence of subjunctive mood. The variation in both adult and child grammars in
subordinate complex predicates involving indicative and subjunctive moods is
acknowledged in recent work on the acquisition of clitic placement in EP (Costa, Fiéis &
Lobo 2015).

Vigário & Frota (1998) have noted that environments involving subjunctive mood
are more resistant to innovative enclisis, and Costa, Fiéis & Lobo (2015) note that finite
embedded clauses involving subjunctive in particular are more clearly marked as contexts
requiring subjunctive in the acquisition process. However, other studies such as Barrie
(2000) suggest that verbal mood should not be expected to affect clitic placement in EP,
since all subjunctive contexts involve a proclisis trigger word. In essence, Barrie’s
argument is that categorical proclisis should be found in the presence of subjunctive
mood. While this is essentially true in my data for simple verb phrases, it is not the case
for the complex verb phrases. The constructional effect, then, outpaces the attraction of
the triggers in these environments that have been described as otherwise resistant to
2014). And, in the case of BP, the change in progress toward untriggered proclisis is
strong enough to counteract the conservative nature of embedded subjunctive clauses.
Table 55. Comparison between prior studies and results in Chapters 4 and 5 for the effects of verbal mood on clitic placement in EP and BP.

<table>
<thead>
<tr>
<th>Verbal mood</th>
<th>Chapter 4 (EP)</th>
<th>Chapter 5 (BP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal mood should not affect clitic placement in EP, since all subjunctive contexts are inherently proclisis-triggered environments (Barrie 2000).</td>
<td>In simple predicates, minimal to no non-normative enclisis with the subjunctive is observed, and more enclisis is found in clauses involving indicative. No significant effect of verbal mood is observed for multi-verb predicates. Both of these effects hold across pronoun types in EP (Tables 6 and 28).</td>
<td>More triggered proclisis is observed in the presence of complex predicates involving subjunctive mood. Other clitic configurations are less common in the presence of subjunctive (Table 49).</td>
</tr>
<tr>
<td>Some contexts are resistant to change cross-linguistically, including subjunctive environments (Poplack &amp; Dion 2009, Poplack 2011, Poplack, Lealess &amp; Dion 2013, Goodenkauf 2014). Based on this fact, we would expect clauses involving subjunctive to show high rates of normative proclisis in EP and potentially also high rates of triggered proclisis in BP.</td>
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6.2.3.2 Verbal frequency

Prior work on frequency effects in morphosyntactic variation has been chiefly limited to binary distinctions of high and low frequency. This view of frequency is exemplified in Erker & Guy’s (2012) study of subject expression in Spanish, in which high and low frequency verbs are shown to follow very different trajectories with respect to the realization of explicit subjects. These authors argue that verbal frequency reflects a logistic rather than linear trajectory, and therefore the binary division provides a clearer image of how other predictors function within the two categories of verbs. In the realm of object clitic placement, both Davies (1997) and Andrade (2010c) consider the frequency
of the governing verb in complex predicates as a predictor of clitic climbing in Portuguese. These authors also create binary low and high frequency categories within their data and include frequency as an independent effect in their descriptive (Davies 1997) and inferential (Andrade 2010c) statistical analyses. Both authors discover that higher frequency governing verbs result in more clitic climbing—that is, in high rates of CL=V V and V=CL V patterns of placement. However, since neither of these authors considers the effect of syntactic conditioning by separating out the effect of verbal frequency within proclisis-triggered contexts, and because both authors choose binary rather than continuous numerical frequency measures, their results cannot be generalized to determine whether frequency has a gradient influence within the supposed obligatory proclisis environments.

Following the trigger words *que, não, and talvez*, clitic placement is found to correlate with verbal frequency in complex predicates in both EP and BP in Chapters 4 and 5. As already mentioned, these complex predicates register greater variation in triggered contexts in EP and are also presumed to be the locus of greater variation in BP. Although the directionality of the effect is similar across the varieties and pronoun types considered, the strongest effect is observed with personal pronouns in EP. In essence, normative proclisis (CL=V V) is directly correlated with verbal frequency: higher frequency governing verbs receive more normative placement in triggered contexts. In EP, this effect is exemplified by a strong negative correlation between enclisis and the frequency of the governing verb, while in BP, greater variation is observed and frequency appears to be a slightly better predictor for the normative triggered proclisis placement than for the other placement options.
The auxiliary-like status of the high frequency governing verbs like *poder, dever*, and *querer* seems to influence clitic placement. In fact, we find increased preverbal clitic placement—or perhaps clitic climbing—in the presence of more auxiliary-like verbs, a fact that has been characterized as an indicator of grammaticalization through “advanced unithood” (Torres Cacoullos 1999, Torres Cacoullos 2013). Thus, the apparent increased unithood, particularly of the *estar a* progressives, suggests that these auxiliary and auxiliary-like verbs may be more grammaticalized in their usage in that frequently used words or sequences of words become more automated as a single unit for processing (Torres Cacoullos 1999). I argue that, other than the progressive construction, the verbs involved in these complex predicates reflect gradient changes in the degree of grammaticalization of the function of the governing verb caused by increased ‘chunking’ into verbal constructions (cf. Bybee 2010). Bybee (2011) asserts that grammatical features that seem to be discrete actually change gradually, and this assertion can potentially be applied to both the degree of grammaticalization of the verb and the placement of the clitic in preverbal or postverbal positions. The change from triggered proclisis to another clitic placement (enclisis in EP, untriggered proclisis in BP) is affected by low frequency verbs first. This finding supports the interpretation that the change is analogical in nature: when changes are found first with low frequency words, they tend to correspond to changes through which the stronger patterns in the language become generalized (cf. Bybee 2002). In contrast to analogical change, change caused by grammaticalization is understood to lead to a reduction in constituent structure, which coincides with decategorialization and a loss of constituent analysis (Bybee 2011). A loss of verbal constituent structure of complex predicates in conjunction with an increase in
verbal frequency would point to an increase in the rate of the general clitic placement pattern found with simple predicates: in EP and BP, we would thus expect increased preverbal placement (CL=V V) with these higher frequency verbs.

Analogical change typically enters the system through low frequency words, and change caused by grammaticalization begins with high frequency forms. In neither variety of Portuguese is the reduction in constituent structure clear, with the possible exception of *estar* progressives and *ir* future forms; furthermore, grammaticalization of the verb phrase is unlikely to be the cause of the patterns based on verbal frequency since we do not observe changes toward greater normative behavior with grammaticalized constructions. Instead, we find that clitics are becoming more generalized postverbally in EP and as untriggered proclitics in BP, with high frequency forms resisting change and maintaining their syntactic “irregularities” (cf. Bybee 2010:66). In EP, the generalization toward enclisis in triggered contexts corresponds to the generalized enclitic placement outside of these contexts. BP, in contrast, finds analogical change toward proclisis to the lexical verb, which is the general pattern found outside of triggered contexts in this variety. Thus, while the result of the change differs between the two varieties, in both cases we find placements in triggered contexts that reflect the placement patterns expected elsewhere in the linguistic system. These findings thus do not support an interpretation of grammaticalization but rather an interpretation of analogical change, and the most clearly grammaticalized high-frequency verbal units involving *estar* and *ir* are the most resistant to the change.

The analogical changes to clitic placement in BP and EP contrast with the apparent effects of grammaticalization on clitic placement in Spanish (Torres Cacoullos

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However, in all of these cases, the placement of the clitic within variable systems appears to be in the process of stabilizing following relatively recent innovations in placement patterns. In EP, the gradient generalization of enclisis by low verbal frequency within environments that have traditionally triggered proclisis is suggestive of analogical change toward this placement throughout the system. In BP, the trigger words appear to have very little effect on clitic placement in 20th—and especially late 20th—century usage, as clitics become more generalized in the position immediately prior to the main verb. Low frequency governing verbs in this variety show practically no ‘normative’ proclisis, suggesting these are among the first environments in which we find analogical attachment of the clitic directly on the lexical verb. And in Spanish, the stabilization of clitic placement is observed through increased proclisis found due to the grammaticalization of certain verbal constructions, including estar progressives and ir futures (Torres Cacoullos 1999, Schwenter & Torres Cacoullos 2010, Schwenter & Torres Cacoullos 2014a). There is thus a clear correlation between the high rate of proclisis (or clitic climbing) in modern Spanish, higher frequency and more fused verbal constructions, and the standard proclisis seen in simple predicates in Spanish: the syntactic result of the fusion caused by the high frequency of verbal constituents corresponds to the generalized placement in simple, finite verb phrases. Accordingly, despite apparent similarities in the rates of pre- and postverbal clitic placement in Spanish and Portuguese, the trajectories appear to be quite different. That is, the Portuguese varieties pattern together with respect to analogical impetus of change, while Spanish clitic placement follows a path of grammaticalization.
### Table 56. Comparison between prior studies and results in Chapters 4 and 5 for the effects of verbal frequency on clitic placement in EP and BP.

<table>
<thead>
<tr>
<th>Verbal frequency</th>
<th>Prior work</th>
<th>Chapter 4 (EP)</th>
<th>Chapter 5 (BP)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>More clitic climbing (CL=V V and V→CL V) is observed with high frequency governing verbs in Portuguese (Davies 1997, Andrade 2010c), but no information is available for whether this holds within proclisis-triggered contexts only.</td>
<td>In complex predicates, in which the generalization of enclisis is observed, governing verb frequency is negatively correlated with enclisis of personal pronouns in triggered contexts. In other words, higher frequency auxiliary and modal verbs are directly correlated with more conservative behavior with respect to clitic placement (Table 16, Figure 8).</td>
<td>In complex predicates in BP, enclisis in triggered contexts is somewhat negatively correlated with verbal frequency. A stronger effect of governing verb frequency is observed in the maintenance of triggered proclisis (CL=V V), whereby this conservative placement is correlated with higher verbal frequency (Figures 20 and 21).</td>
</tr>
<tr>
<td></td>
<td>In Spanish complex predicates, an increase in proclisis is observed with more grammaticalized verbal constructions (Torres Cacoullos 1999, Schwenter &amp; Torres Cacoullos 2010, Schwenter &amp; Torres Cacoullos 2014a).</td>
<td>This negative correlation between verbal frequency and non-normative clitic placement is also observed—though to a lesser degree—with third person anaphoric direct objects (Figure 12).</td>
<td>Untriggered proclisis is not correlated with verbal frequency (Figure 22).</td>
</tr>
<tr>
<td></td>
<td>Simple predicates show no correlation between verbal frequency and clitic placement.</td>
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</table>

### 6.2.3.3 Animacy

The effects of subject and object animacy are relatively stable across the two varieties of Portuguese: subject animacy affects clitic placement more than object animacy. Object animacy is not expected to have an effect on placement in BP due to the constraints on object expression and tonic pronoun usage: inanimate objects are often null, while animate third person objects are typically realized as tonic rather than clitic pronouns. A similar pattern of differential object marking is found in EP, such that inanimate objects are often not realized and animate ones are typically realized as clitics (Schwenter &
Thus, object animacy is already marked in Portuguese by explicit and null forms and is not expected to have a strong influence on the placement of clitic objects. This contrasts with the reported effects of animacy of the clitic reference or relative animacy of subject and clitic reported for related Spanish varieties (Myhill 1988, Davies 1995, Schwenter & Torres Cacoullos 2014). In essence, greater clitic climbing—or proclisis—is found with clitics that have human or animate referents (Davies 1995, Schwenter & Torres Cacoullos 2014), or with those clitics that are more animate than their corresponding subjects (Myhill 1988) in Spanish.

In Chapters 4 and 5, subject animacy emerges as a significant predictor of object clitic placement in proclisis-triggered contexts in EP and BP. In EP, this effect is observed with the personal object pronouns through greater non-normative enclisis with first and second person subjects (Table 10), especially with simple single-verb predicates (Figure 3). The third person accusative objects are placed according to similar subject animacy constraints: nonhuman subjects cooccur largely with normative proclisis, and human subjects allow for more variation and non-normative (enclitic) placement (Table 24). As with the personal pronouns, this pattern is observed in simple, single-verb predicates, which show near categorical normative proclisis with nonhuman subjects (Table 26). With respect to clitic placement in complex predicates, EP has the highest rates of non-normative enclisis when there is symmetry between subject-clitic animacy: human subjects with human clitics and nonhuman subjects with nonhuman clitics correspond to relatively high rates of enclisis in this context (Table 25).

In complex predicates in modern BP, the effect of subject animacy is similar to that found in simple predicates in EP: nonhuman subjects correlate with clitics placed in
the more conservative, normative proclitic position (CL=V V), while human subjects, in contrast, correlate with higher rates of untriggered proclisis (V CL=V) (Figures 24 and 25). Meanwhile, enclitics in BP are not affected by subject animacy (Figure 23). In essence, human subjects correlate with clitics placed in the least marked position throughout the system (V CL=V in BP and (V) V=CL in EP), in spite of the presence of the triggers. Triggered proclisis and untriggered proclisis in BP thus function in complementary distribution with respect to subject animacy, whereas clitics and tonic pronouns contrast with nulls in complementary distribution with respect to object animacy (cf. Kato 1993).

Andrade (2010c) argues that climbed clitics such as proclitics in proclisis-triggered environments in EP are more salient than clitics that are placed postverbally. Furthermore, these climbed clitics receive marking as secondary topics. He uses this argument to explain the low rate of clitic climbing found with reflexive pronouns, since these clitics do not index a secondary topic but rather co-index the same topic as the subject. This explanation may be used to aid in the understanding of why EP strongly favors enclisis for human objects in the presence of human subjects and for nonhuman objects with nonhuman subjects: when objects and subjects reflect similar animacy levels, there is not a large difference in salience between them. However, this pattern is only observed for third person anaphoric direct objects and not personal pronouns that can function as reflexive clitics (Table 25). And, in fact, the high rate of non-normative enclisis with first person subjects is observed regardless of the object referent (Table 10). Consequently, the salience argument related to primary and secondary topics is inadequate for the data in Chapters 4 and 5, since the effect of subject animacy is
observed for all pronominal forms considered. That is, nonhuman subjects would be considered less topical by Andrade (2010c), and therefore clitic climbing would not be necessary to make an object—and particularly a nonhuman object—more salient.

With respect to broader questions of animacy and topicality within discourse, theories of accessibility (Ariel 1990, Ariel 1994) predict that more accessible elements or referents will be encoded with minimal forms. Accessibility theory thus predicts that more topical entities will be the ones most likely to be encoded by null objects, while less topical entities will be more likely to receive overt encoding. Studies on both Spanish and Portuguese objects, however, provide evidence that contradicts these predictions, with null objects being found with less topical and less accessible referents (Reig Alamillo 2009, Schwenter & Silva 2010). Meanwhile, animacy ties in with this line of argumentation in that less animate entities, which usually show less topic persistence and greater referential distance, are the ones encoded by null objects. Thus, less topical and less animate entities, while less accessible in discourse, receive less overt encoding. The explanations provided by Andrade (2010c), Myhill (1988), and Davies (1995) make an indirect connection between topicality, relative animacy, and ‘salience’ (i.e. accessibility) with respect to the placement of clitics: more salient and more topical—in the sense of marking a secondary topic—are the clitics that are most likely to ‘climb’. However, this analysis is not fully supported by my results in Chapters 4 and 5. First and foremost, referential distance and topic persistence as operationalized rather than ad hoc measures of topicality involving the labeling of topics by relative animacy or primacy in a given sentence are not found to influence clitic placement in triggered contexts in EP. Secondly, animacy of the object clitic does not affect clitic placement in these contexts;
subject animacy, in contrast, is a key factor influencing the clitic placement. And, unlike Bybee’s (2010) assessment that first person verb forms resist change due to greater autonomy, it appears that these first person verbs with highly animate subjects are, in fact, the very ones that are most susceptible to analogical change.

Simões (2006) talks about phonological restrictions on the placement of clitic objects: personal pronouns beginning with consonants are generalized in preverbal (or untriggered proclitic) position, and object pronouns beginning with vowels are generalized in postverbal position to maintain strong phonological distinctions between object and verb. However, the use of the clitics beginning with vowels (o, a, os, as) is largely restricted in BP due to the replacement of these clitic forms by tonic pronouns for animate referents and null expression for inanimate referents. Since the present study is restricted to the personal pronoun clitics that begin with consonants, the enclitic and triggered proclitic placements of these forms beginning with consonants are left unaccounted for by the phonological analysis provided by Simões (2006). Accordingly, the subject animacy effects found in Chapter 5 help to explain the constraints influencing triggered proclisis and untriggered proclisis in this variety, and priming allows for the usage of these clitics in postverbal position.

As explained in Chapter 4, noncanonical, nonhuman subjects are marked in the syntax by maintaining conservative morphosyntactic patterns with respect to object pronouns in transitive phrases: in both EP and BP, nonhuman subjects cooccur at high rates with triggered proclisis (CL=V (V)). Canonical human subjects in transitive sentences appear to promote immunity to the pull of the triggers que, não, and talvez on the part of the clitic objects, and the clitics in these environments are found at higher than
expected rates in the unmarked placement for contexts without a proclisis trigger. In EP, canonical subjects correlate with higher rates of enclisis ((V) V=CL), and in BP these subjects correlate with increased untriggered proclisis (V CL=V). Given that analogical change in EP toward generalized enclisis appears to be led by complex verb phrases, especially those involving low frequency governing verbs, the larger effect of subject animacy observed in simple predicates is to be expected. Within the category of simple predicates, more canonical subjects are the ones that are at the forefront of the analogical change toward generalized enclisis. BP, on the other hand, has largely already realized a change toward categorical proclisis to the lexical verb, and within the complex predicates considered in Chapter 5, canonical human subjects allow for greater generalization of this placement. Across Portuguese varieties, then, contexts involving the most predictable and prototypical subjects provide an entry point for analogically-leveled clitic placement patterns in high frequency verb phrases in which the change has not yet reached completion or near-completion. Less predictable subjects seem to function similarly to the subjunctive mood: both are loci of conservative grammatical patterns. These less frequent and less prototypical constructions may require more production and processing effort, thus resulting in more conservative behavior.
Table 57. Comparison between prior studies and results in Chapters 4 and 5 for the effects of subject and object animacy on clitic placement in EP and BP.

<table>
<thead>
<tr>
<th>Prior work</th>
<th>Chapter 4 (EP)</th>
<th>Chapter 5 (BP)</th>
</tr>
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<tbody>
<tr>
<td>Data from EP and BP suggest differential object marking for third person anaphoric direct objects, such that inanimate objects are often null while animate ones are typically realized as clitics or tonic pronouns, respectively (Schwenter &amp; Silva 2010, Schwenter 2014). Subject animacy is not explored in prior work on clitic placement in EP and BP.</td>
<td>Personal pronouns show greater enclisis in triggered contexts with first person subjects, especially in simple predicates (Table 10, Figure 3). Third person accusative objects show greater enclisis in triggered contexts with human subjects. Dividing out human and nonhuman third person subjects, nonhuman subjects show significantly less non-normative enclisis than human subjects. This effect is observed most in simple predicates (Tables 24-26).</td>
<td>In modern BP, nonhuman subjects show greater normative triggered proclisis (CL=V V), and human subjects show increased rates of untriggered proclisis (V CL=V). Triggered proclisis (CL=V V) and untriggered proclisis (V CL=V) are found in complementary distribution with respect to subject animacy. Non-canonical (nonhuman) subjects promote more conservative clitic placement, while canonical (human) subjects correspond to clitics placed in the unmarked position in the grammar at large. Enclitics are not affected by subject animacy.</td>
</tr>
<tr>
<td>More CC (proclisis) emerges in Spanish with clitics that have human or animate referents (Davies 1995, Schwenter &amp; Torres Cacoullos 2014).</td>
<td>For both pronominal object types, non-canonical (nonhuman) subjects promote more conservative clitic placement. Canonical subjects cooccur with more enclitics, which correspond to the standard placement in unmarked (untriggered) environments.</td>
<td></td>
</tr>
<tr>
<td>More CC (proclisis) is found in Spanish with clitics that are more animate than the subject that controls the verb (Myhill 1988).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First singular verb forms (involving highly animate agents) are more autonomous and thus resistant to change in ways that other verb forms are not (Bybee 2010).</td>
<td></td>
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</tbody>
</table>

6.2.3.4 Object function

Chapters 4 and 5 display very similar results with respect to the placement of object clitics based on the function of these personal pronouns in triggered contexts. In both BP
and EP, indirect object clitics in complex predicates are found at higher rate in the normative (triggered) preverbal position. Direct object pronouns and reflexive pronouns, meanwhile, are found as enclitics at higher rates in EP (Figures 5 & 7). Enclitics in triggered contexts in BP do not follow the same grammar but instead are common when primed and in the presence of less frequent governing verbs.

The increased representation of (triggered) proclisis involving personal pronouns in BP and EP follows the patterns reported for EP and Spanish by Andrade (2010c) and Davies (1995), respectively. Andrade (2010c) finds more clitic climbing (i.e. either proclisis or enclisis in complex predicates in EP) in the presence of datives and the least clitic climbing (i.e. a strong preference for enclisis) with reflexives. In his study, accusative direct objects also exhibit lower rates of clitic climbing than the indirect object clitics. Davies (1995) takes into account reflexive pronouns in contrast with other kinds of clitics in a wide range of Spanish varieties. He finds that reflexive clitics strongly disfavor preverbal placement and instead typically maintain their adjacency with the associated verb as enclitics, a finding which parallels that of Andrade (2010c). Davies (1995) interprets the placement of reflexives as enclitics as a result of mirroring between the syntactic and lexical dependency of these clitics, and Andrade (2010c) understands the increased clitic climbing with indirect objects in EP as a reflex of topicality. In essence, more animate entities that reflect highly topical elements in the discourse are typically placed preverbally in Spanish (Myhill 1988, Davies 1995) and EP (Andrade 2010c), and arguably reflexive clitics—whether lexical reflexives that always co-occur with the clitic, or ‘true’ reflexives in which the subject/agent acts upon him- or herself as the object and patient—often co-index highly topical and animate entities that appear in
subject position. Thus, prior work showing typically enclitic placement of reflexives seen in EP (Andrade 2010c) does not adequately explain the conflicting constraints on the grammar: highly animate entities are placed preverbally, but reflexive clitics are typically placed postverbally (cf. Myhill 1988, Davies 1995, Andrade 2010c). Andrade (2010c) argues that reflexive clitics do not represent a secondary topic, and therefore these clitics are very infrequently placed in ‘climbed’ (often preverbal) position because ‘climbed’ positions are reserved for secondary topics. This relates to the questions of accessibility addressed above, in that more accessible entities would be expected to be placed in the ‘less salient’ and unmarked postverbal placement. And, in addition to their greater accessibility, the lexical dependence proposal put forth by Davies (1995) to explain greater enclisis with reflexives in Spanish is also relevant to my Portuguese data: the lexically-dependent clitics may well have a strong enough dependence that it overrides the weakening phonological pull of the proclisis triggers, resulting in more enclisis. This explanation, however, leaves the direct object clitics unaccounted for.

In the present study of only triggered contexts, both the EP data at large and the older BP texts display the same pattern of higher rates of triggered proclisis with indirect objects than with reflexives and direct objects. Since Andrade (2010c) and Davies (1995) included both contexts with potential proclisis triggers and contexts without them, the effect of object function outside of triggered contexts in these varieties remains unclear. It may be the case that object function is strong enough to function outside of triggered contexts and influence the probabilistic grammar of clitic climbing. With respect to the patterns observed in the EP and BP in the present work, it appears to be the case that normative clitic placement (triggered proclisis) is selected at higher rates with canonical
experiencers, which are typically human. Patients, on the other hand, are typically inanimate. Non-canonical patients are those that index animate or human referents, and these are the very clitics that display the least normative behavior in EP and BP: they are found at higher rates in the unmarked placements whose usage is on the rise (i.e. enclitics in EP and untriggered proclitics in BP). In essence, there appears to be a leveling effect through which non-canonical object function (in conjunction with canonical subject forms) is subject to the innovative syntax found in unmarked, untriggered environments. Highly predictable canonical object functions, in contrast, allow for greater maintenance of conservative, archaic, and unproductive clitic placement. This analysis corresponds with trends observed elsewhere in the variable grammar. For example, low frequency (or less predictable) governing verbs in EP are the very loci of change toward generalized enclisis in complex predicates (Figure 8). Similarly, unprimed targets in BP receive the most predictable, unmarked placement as untriggered proclitics (Table 46), while the less predictable enclitic placement is most available when primed. However, this argument for non-canonical object function resulting in the innovative (non-normative) placement of the clitic object counteracts the subject animacy constraints discussed above: the canonical (human) subjects are the ones that correlate with the innovative syntax, while non-canonical (human) direct objects correlate with the innovative or non-normative clitic placement. Canonical (human) indirect objects, however, are found at high rates in the normative triggered proclitic placement. These patterns suggest that canonicity (or predictability) of the subject forms and canonicity of the object forms are at odds with each other in their effect on object clitic placement in Portuguese.

Furthermore, I argue that BP grammar has changed such that the antiquated effect
of object function is reanalyzed in modern usage as an effect of animacy: the combination of nonhuman subjects and human objects results in more triggered proclisis. In essence, indirect objects as typically human elements and potentially more animate than the subject were often placed preverbally as triggered proclitics in pre-1990 usage. Nonhuman subjects, in combination with first and second person clitics, as well as dative third person clitics, are nearly always less animate than the object pronoun; the left branch in Figure 24 shows that post-1990 usage has a relatively high rate of triggered proclisis under these conditions. EP, however, maintains the grammar whereby indirect objects are placed preverbally at higher rates than other object pronouns. The effect of animacy in this variety, meanwhile, is found with third person anaphoric direct objects, while animacy of third person direct objects in BP is understood to affect form (overt vs. null) rather than placement. Accordingly, I hold that the vague notions of topicality that Andrade (2010c) and Davies (1995) suggest to explain differences between dative, accusative, and reflexive clitic placements in EP and Spanish are, at the very least, secondary to the question of canonicity, predictability, and animacy with respect to clitic placement following proclisis triggers in EP and BP.
<table>
<thead>
<tr>
<th>Object function</th>
<th>Prior work</th>
<th>Chapter 4 (EP)</th>
<th>Chapter 5 (BP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accusative, dative, and reflexive</td>
<td>Andrade (2010c) finds more CC (largely pronominal) with datives and the least CC (enclisis) with reflexives in EP.</td>
<td>For personal pronouns, complex predicates involving present or future time reference show more enclisis with DOs and reflexives, or, in other words, more pronominal (CL=V V) with IOs (Table 24; Figure 5 and Figure 7).</td>
<td>In older documents, IOs show a higher rate of triggered (CL=V V) pronominal (Figure 24).</td>
</tr>
<tr>
<td>No mention of object function in prior studies involving BP.</td>
<td>Davies (1995) finds less CC (pronominal) with reflexives than with non-reflexives in Spanish.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 58. Comparison between prior studies and results in Chapters 4 and 5 for the effects of object function—accusative, dative, and reflexive—on clitic placement in EP and BP.

6.2.3.5 Priming

Priming has not previously been reported as a factor influencing clitic placement in Portuguese, but recent studies on related varieties have shown that priming does indeed affect clitic placement in Western Romance. That is, descriptive and variationist work such as Davies (1997), Simões (2006), and Andrade (2010b, 2010c) address questions related to the effects of various factors on clitic placement in Portuguese varieties, but the effect that a prior clitic placement has on target tokens is not mentioned or explored in any of these studies. Barnes, González López & Schwenter (2014) and Schwenter & Torres Cacoullos (2014b), however, have found that priming affects clitic placement in Asturian Spanish and Mexican Spanish, respectively. In fact, the placement of the prior direct object clitic in Asturian Spanish is the only significant predictor of the target clitic’s placement. In this variety, enclisis of the target clitic is significantly more likely if the prior clitic—or prime—is also enclitic. Schwenter & Torres Cacoullos (2014b) show
a similar pattern in Mexican Spanish: prior enclisis primes target enclisis. While priming does not appear to influence placement in the EP personal pronoun data in proclisis contexts (Chapter 4, Table 15), a similar effect to that found in Asturian Spanish becomes apparent for the anaphoric direct object data for EP (Chapter 4, Table 29): prior enclitics prime target enclitics in triggered contexts in EP. The Brazilian data, which includes only personal object pronouns, also show a similar effect for the enclisis of target object pronouns in triggered contexts (Chapter 5, Table 47 and Figure 23): enclisis is primed by prior enclitics.

Based on the similarities in results, it might be expected that enclisis primes enclisis in all Spanish and Portuguese varieties. However, the status of enclisis differs considerably in these varieties. In Asturian Spanish, Mexican Spanish, and Brazilian Portuguese, enclisis reflects an older, less productive pattern in the language. Asturian—in contrast with Asturian Spanish—and EP, on the other hand, show generalized enclisis in unmarked contexts. Thus, the priming effect seen in these two distinct groups suggest different patterns at play. In Asturian Spanish, Mexican Spanish, and BP, the priming effect that enclitics have on target clitic placement is suggestive of a cross-linguistic trend whereby older, obsolescing morphosyntactic patterns display stronger priming effects than more innovative and productive ones (cf. Schwenter 2015). This general trend can be found in other contexts in these languages, such as with -ra and -se subjunctive forms in Spanish with the older, less productive -se forms strongly priming target -se usage (cf. Schwenter 2013b). A similar pattern is found in first person plural usage in BP: the older variant nós is strongly primed by prior nós, contrasting with significantly less priming of the innovative a gente option (Schwenter 2015). And, as Schwenter (2015) shows, the
priming effect increases incrementally as the overall frequency of use of the obsolescing form decreases.

The priming observed in the EP data provides evidence for differences in the directionality of the patterns of change in the two global varieties of Portuguese explored in the current work. Since obsolescing morphosyntactic structures are most persistent in when primed, the lack of persistence effects observed for EP personal pronouns is to be expected. That is, enclisis in EP is on the rise, in contrast with declining rates of enclisis in BP and Spanish. So, while BP and Spanish display persistence of the clitic placement that is falling out of favor (Spanish) or has already been largely abandoned (BP), the same placement in EP is becoming more generalized within contexts that historically have favored proclisis. With respect to the priming effect seen in EP with third person direct object pronouns, which follows the same pattern as found in BP and Spanish, this is also expected from the changes in usage. That is, these third person direct object clitics are not as productive as other personal object pronouns in the language. Unlike the personal pronouns, these clitics are often omitted in favor of null forms when referencing canonical, nonhuman direct objects (cf. Schwenter & Silva 2010, Schwenter 2013a, Schwenter 2014). Thus, the overtness of the pronouns themselves is suggestive of either unproductive usage (in the case of nonhuman referents) or non-canonical, unexpected forms in the syntactic role of direct object (in the case of human referents). The priming effect resulting in increased rates of enclisis of third person in proclisis-triggered contexts could be a case of increased persistence of obsolescing forms, in that a less common explicit clitic itself primes the continued usage of the same uncommon form and placement when nearby in discourse (cf. Table 29). Accordingly, the results for the
priming of enclisis in EP for third person anaphoric direct objects and for BP personal clitics provide further evidence for Schwenter’s (2015) claim that persistence effects are stronger for morphosyntactic placements patterns that have largely been replaced by a newer productive option.

The new data presented here for BP and EP have added to the previous literature through the inclusion of the question of priming, in addition to the exploration of this factor within the restricted contexts involving proclisis triggers. Although the effects of priming on clitic placement outside of the triggered contexts in EP and BP remains largely unknown, certain predictions can be made. First, the priming of clitic placement outside of triggered contexts in EP is not expected, since enclisis is the generalized norm (cf. Vigário & Frota 1998, Galves, Moraes & Ribeiro 2005, Galves & Sandalo 2012). Second, it is expected that untriggered contexts in BP display the same pattern of enclisis priming, given that the untriggered proclisis (V CL=V) placement is by far the most common of the available options even in triggered contexts and that the other options have already fallen out of favor. Cyrino’s (1993) argument that enclisis in modern BP is largely reduced to third person anaphoric direct objects is thus incomplete: these clitics are excluded from the present study, and enclisis of the personal pronoun clitics to the infinitive in contemporary BP is clearly largely primed by prior enclisis in the discourse context. This finding in the BP data both supports and builds on Galves, Moraes & Ribeiro’s (2005) claim that enclisis usage reflects the late acquisition of older grammar, which is no longer productive in the naturally acquired grammar; nevertheless, by analyzing only personal pronoun data, my results also suggest a divergence from these authors’ assertion—similar to Cyrino’s (1993)—that enclisis is restricted to the third
person accusative clitics that are presumed to also be late acquisitions through exposure to formal schooling.

<table>
<thead>
<tr>
<th>Priming or Persistence</th>
<th>Prior work</th>
<th>Chapter 4 (EP)</th>
<th>Chapter 5 (BP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>There are no prior studies of the effects of priming on EP or BP object clitic placement.</td>
<td>Enclisis is more persistent in EP for third person anaphoric direct objects (Table 29): enclitic primes 1-7 clauses back from the target prime enclitic targets at statistically significant rates when compared to proclitic primes.</td>
<td>Enclitic primes result in elevated rates of enclitic targets for BP personal pronouns (Tables 46 &amp; 47).</td>
</tr>
<tr>
<td></td>
<td>Enclisis in contemporary BP is restricted to third person anaphoric direct objects o, a, os, as (Cyrino 1993).</td>
<td>No priming effect is observed for personal pronouns in EP (Table 15).</td>
<td></td>
</tr>
<tr>
<td>In related varieties, priming has been shown to lead to higher rates of occurrence of the older, obsolescing form. In Mexican Spanish and Asturian Spanish, enclitic primes result in higher rates of enclitic targets across contexts (Schwenter &amp; Torres Cacoullos 2014b, Barnes, González López &amp; Schwenter 2014).</td>
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<td></td>
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</tbody>
</table>

Table 59. Comparison between prior studies and results in Chapters 4 and 5 for the effects of priming or persistence on clitic placement in EP and BP.
CHAPTER 7. CONCLUSIONS

This chapter includes broad generalizations regarding the main findings of the dissertation, along with future directions of research related to object clitic placement in Portuguese and related varieties.

7.1 CONCLUSIONS

Although this dissertation does not provide strong evidence for the theoretical status of clitics in European and Brazilian Portuguese, certain generalizations about the trends in contemporary usage are suggestive of differences in the categorization of clitics in the two varieties. Both varieties appear to be moving toward a single placement option, with the shift clearly more advanced in BP than in EP. That is, BP shows generalized preverbal placement in simple predicates (Perini 2002, Simões 2006) and, since at least the late 20th century, generalized untriggered proclisis (V CL=V) in the presence of supposed proclisis triggers. The triggers appear to have very little effect on clitic placement in this variety, with subject animacy, object function, and verbal frequency as factors that have the potential to conserve the function of triggering the most extreme proclisis placement. BP clitics are already largely generalized as preverbal elements, and they appear to be in the process of being replaced by tonic and null forms (Cyrino 1990, Cyrino 1993, Schwenter 2014). The new data in Chapter 5 does not offer evidence that the clitics that are expressed are in any way becoming more affix-like. Instead, as the word order in BP is becoming more fixed, the stabilization of clitics in preverbal position
seems to be a result of the process of moving away from a morphology-heavy synthetic language to becoming a more analytic language variety. That is, this process of becoming more analytic in nature corresponds to the increased rates of explicit subjects, the reduction in verbal morphology, the use of tonic pronouns as objects, less freedom in word order, and the placement of clitic objects in a fixed position prior to the verbal host.

EP clitics, on the other hand, are being generalized into a fixed postverbal position, even in contexts that have been long thought to normatively require proclisis. Simple predicates remain the most resistant to the change, followed by complex predicates with very frequent governing verbs. The generalization of enclisis points toward analogical change in EP, whereby clitic placement is not governed by the presence of certain phonological (Vigário & Frota 1998) or syntactic (Andrade 2010b, Galves & Sandalo 2012) categories, but rather by the presence of a particular base form (i.e. infinitival verbs) with less freedom of movement. Costa, Fiéis & Lobo (2015:24) argue that “the different rates of proclisis found in different contexts [in EP] show that an overall explanation for the generalization of enclisis (e.g. less complex derivation or change in the morphological status of the clitic) is not plausible”. While the trigger words themselves may show differences in placement patterns in experimental data, other factors are at play in determining a speaker’s clitic placement. The findings presented in Chapters 4, 5, and 6 suggest that the generalization of enclisis in EP and proclisis in BP are clearly governed by object animacy, verbal frequency, priming, and other factors related to the grammatical and discourse structure that are not considered in prior work.

Among the main findings in this dissertation is the existence of grammars governing what has previously been described as non-normative clitic placement. In fact,
the data in Chapter 4 do not support Galves & Sandalo’s (2012) argument that the (over)generalization of enclisis in EP is the result of speech errors by young people. Even high registers show considerable enclisis throughout the 20th century, which suggests a case of relatively stable variation in which verbal construction type plays an important role in the placement of object clitics. These data thus indicate slow analogical change toward the generalization of enclisis beginning in predicates that contain relatively infrequent governing verbs. In essence, the exclusively enclitic pattern found outside of these triggered contexts exerts an effect on the system at large, and low frequency verbs in complex predicates are the entry point of this analogical pattern in the triggered contexts. Furthermore, the differences between the grammars observed in the EP and BP results support the treatment of the two varieties as unique languages undergoing separate processes of change, with internal changes happening at different rates in each variety. And, indeed, the grammars of both languages are variable and gradient in nature, with distinct usage patterns based on factors such as subject animacy, verbal mood, verbal frequency, and priming.

Another important finding in this dissertation is the apparent existence of multiple grammars governing the placement of clitics in each variety of Portuguese. In European Portuguese, this manifests itself in the fact that simple and complex predicates are constrained by completely different factors (cf. Figures 6 and 7, Figure 14). Additionally, written and oral modes of communication also display different governing factors (cf. Figures 4 and 5, Figures 15 and 16). In Brazilian Portuguese, the multiple grammars are apparent in the factors governing the three different placement patterns: priming is the main factor influencing the selection of enclisis, while the document source year and
subject animacy contribute to the selection or non-selection of triggered proclisis. It is therefore clear that the grammar of each respective language variety does not reflect a singular, fossilized grammar that fits the simplified descriptions presented in (54) and (55) at the beginning of Chapter 6.

7.2 Future directions
This dissertation has sought to determine the factors governing the variation in object clitic placement in Brazilian and European Portuguese. By using corpus data from a variety of modes of communication, along with a variety of statistical analyses, this study provides robust evidence for the diverging directions of clitic usage in these two varieties of Portuguese, whereby both varieties display changes in placement patterns from Classical Portuguese (cf. Galves, Moraes & Ribeiro 2005). Not only do the modern grammars for clitic placement vary between the two varieties, but within each variety multiple grammars emerge from the significant, and gradient, constraints influencing clitic placement. Nevertheless, the work on this topic remains far from complete, and the next steps in this line of research should include exploration of some of the following issues:

Since priming has a clear effect on BP enclitic placement, the question remains regarding whether different placements of proclitics would also show a stronger effect on the two proclitic options in this variety. In essence, the coding of priming effects in the present work does not distinguish between proclitic primes of the simple predicate variety (CL=V), those involving triggered proclitics (CL=V V), and those involving untriggered proclitics (V CL=V). Thus, the effect of each kind of proclitic prime on the target
remains unexplored. I predict that triggered proclisis primes triggered proclisis in BP, mirroring the enclisis priming effect, since both involve obsolescing morphosyntactic patterns. That is, triggered proclisis (CL=V V) in BP is not productive in contemporary BP, it is expected that triggered proclisis in prior discourse primes more triggered proclisis, mirroring the effect seen for the similarly unproductive enclitics in BP, as well as the pattern found for enclisis in Asturian Spanish (Barnes, González Lopez & Schwenter 2014). Untriggered proclisis would not be expected to show a robust priming effect when the different kinds of proclisis primes are coded separately, since this reflects the default selection in modern BP.

Third person clitic *se* tokens were excluded from the data in Chapters 4 and 5, due to the multiple uses of this form. Because *se* as a clitic can be used for reflexive and inherent meanings, as well as passive and impersonal meanings, it was determined that the inclusion of this clitic form would add unwarranted complexity to this analysis of person object clitics in triggered environments. These third person forms should instead be considered in their own standalone study to determine to what extent reflexive and inherent *se* patterns with other reflexives, in comparison with passive and impersonal *se*. Andrade (2010c) reports that clitic climbing is found with higher rates in the presence of passive *se*, while reflexive and inherent *se* show the same low rates of clitic climbing as other reflexive objects in EP. This finding has been explained with reference to the topicality of the clitic object: secondary topics, Andrade (2010c) argues, are more susceptible to clitic climbing, so reflexive and inherent clitics, which do not index entities different from the subject, are not likely to be displaced from postverbal position, and passivizing *se* functions as the subject and topic with the result that preverbal position is
much more likely. New data, particularly limited to environments containing proclisis triggers, could offer new evidence for the relationship between the placement and the role of passives and reflexives in EP, as well as BP, in triggered contexts.

Although verbal frequency does indeed appear to be directly correlated with clitic placement in complex predicates in triggered contexts in EP and BP, other measures have been proposed for the study of the effects of clitic climbing in Spanish. Torres Cacoullos (1999) and Requena (2014), for example, argue against the use of raw frequency measures in favor of other measures of unithood. Torres Cacoullos (1999), who looks at clitic placement in auxiliary + gerund constructions diachronically in Spanish, suggests that an increase in the token frequency for an auxiliary + gerund sequence that coincides with a decrease in standalone gerunds reflects an increase in what she calls “construction frequency”. This increase in token frequency is indicative of grammaticalization of the verbal construction, with the result that clitic climbing (proclisis) becomes more common over time in these constructions. Requena (2014), who considers clitic placement in Argentine Spanish, interprets his data as lacking a clear effect of grammaticalization or frequency, the latter of which is measured by the number of tokens of a given governing verb within his dataset. Instead, he argues that there is an effect of increased unithood and fusion through adjacency: for constructions that have not completely lost their compositionality, the subunits retain associations that make them more or less favorable for a given clitic placement. To test this, he considers the type of constituents that follow tener que and poder, as well as the types of constituents that typically follow the associated lexical verbs. Accordingly, higher rates of following direct objects as nouns, propositions, or pronominal constituents seem to reflect higher rates of enclisis, while
lower rates of following nouns, propositions, and pronouns lead to greater proclisis. Thus, the predictability of phrasal constituents from a usage-based perspective offers insight into the placement of clitics in this variety. A more traditional type/token frequency ratio could also provide insight into the relative entrenchment or fixedness of a verbal construction. Furthermore, consideration of the thematic roles of the subject and object with respect to the governing and the lexical verbs could give evidence for a semantic influence on clitic placement. In the study of clitic placement in EP and BP, these measures are left for later analysis.

Beyond the type/token ratio as a possible frequency measure, high and low frequency verbs could be divided into separate data sets. This approach would follow Erker & Guy’s (2012) methodology for their study of the factors governing Spanish subject expression. The two data sets would reflect high and low frequency governing verbs, and the goal would be to determine whether the low and high frequency verbs follow completely different grammars with respect to clitic placement. Such an analysis would differ crucially from Davies (1995, 1997) and Andrade (2010c) in that frequency would not be considered as an independent factor to study but rather as the basis for the creation of each dataset to determine how frequency interacts with the rest of the grammar. Based on the results presented in Chapters 4 and 5, the constructional effect of complex predicates is quite strong, and there are clear differences between low and high frequency governing verbs with respect to clitic placement. An analysis that creates a categorical division may illuminate larger differences in the grammars employed by speakers based on their accumulated experience with highly frequent and infrequent verbs.
Finally, an analysis that looks at other related varieties could offer insight into additional cross-linguistic patterns. Davies (1995), for instance, provides some preliminary data on the prevalence of clitic climbing in different dialects of Spanish. What is missing from his work, however, is a systematic statistical analysis that includes a variety of factors that may be influencing the different rates observed in his data for each regional variety, including, for example, object animacy, verb frequency, subject person and number, etc. Furthermore, the question of whether the erstwhile proclisis triggers in Spanish still have any effect on clitic placement remains untouched by systematic, data-driven studies of Spanish clitic placement. Davies (1995) does include contexts involving *que* ‘that’ and *y* ‘and’ in his descriptive statistics in the broad sampling of Spanish dialects, but the interactions and collinearity between these environments and other factors constraining clitic placement are left unexplored. Both Peninsular and Caribbean varieties of Spanish would serve as particularly illuminating choices for the study of the effects of proclisis triggers on clitic placement. Similarities in development and modern morphosyntactic patterns between European Portuguese and Peninsular Spanish, as well as between Brazilian Portuguese and Caribbean Spanish (Guy 1981, Guy 2014), may be further manifested through parallels in the relationship between proclisis triggers and placement, as well as through the factors that determine placement of object clitics. With respect to the Caribbean varieties and BP, these languages share features such as variable NP and subject-verb agreement patterns, in addition to various phonetic phenomena (Scherre & Naro 1991, Scherre & Naro 1992, Guy 1981, Guy 2014). As Guy (2014:443) writes, “these languages [BP and Caribbean Spanish] may very fruitfully be examined together, and such a joint and comparative approach permits broader
generalizations and deeper insights than may be obtained by considering each of them separately”. These questions and others related to object clitic placement in Western Romance provide fertile avenues for future research within the field of morphosyntactic variation.
REFERENCES


Andrade, Aroldo Leal de. 2010b. A subida de clíticos em português: Um estudo sobre a variedade europeia dos séculos XVI a XX. Doctoral dissertation. Campinas, SP.


Barnes, Sonia, Verónica González López and Scott Schwenter. 2014. Variable clitic position in Asturian Spanish. Paper presented at the 7th Workshop on Spanish Sociolinguistics (WSS7). Madison, WI.


Bresnan, Joan and Jessica Spencer. 2013. Frequency and variation in English subject-verb contraction. Draft for comments.


Cyrino, Sonia M. L. 1990. O objeto nulo no português do Brasil: uma mudança paramétrica? Ms, UNICAMP.


Davies, Mark and Michael Ferreira. 2006-. Corpus do Português: 45 million words, 1300s-1900s. Available online at [http://www.corpusdoportugues.org](http://www.corpusdoportugues.org).


de Prada Pérez, Ana, Adrián Rodríguez Riccelli, Kelly Woodfine, and Sarah Rogers. 2014. The Effects of Language Contact on Variable Phenomena: Spanish-English Bilingual Clitic Climbing. Paper presented at the 7th Workshop on Spanish Sociolinguistics (WSS7). Madison, WI.


Goodenkauf, Justin. 2014. Old Spanish Interpolation from Classical Arabic Transfer. Paper presented at the Ohio State University Congress on Hispanic and Lusophone Linguistics (OSUCHiLL 2014). Columbus, OH.


Khachaturyan, Elizaveta. 2013. Acquisition of Italian object clitics by a trilingual child. In Christine Meklenborg Salvesen and Hans Petter Hellend (eds.), *Challenging


Schwenter, Scott A. 2013a. Differential object marking... in Portuguese?! Plenary talk at Portuguese Linguistics in the US (PLUS 2013). Athens, GA.


