Dear Author,

Please, note that changes made to the HTML content will be added to the article before publication, but are not reflected in this PDF.

Note also that this file should not be used for submitting corrections.

Available online at www.sciencedirect.com

ScienceDirect

Lingua xxx (2016) xxx–xxx

Lingua

www.elsevier.com/locate/lingua

Prosody and object clitic placement: A comparison of Old and Modern Spanish

Imme Kuchenbrandt

Johann Wolfgang Goethe-Universität Frankfurt am Main, Institut für Romanische Sprachen und Literaturen, Norbert-Wollheim-Platz 1, D-60629 Frankfurt am Main, Germany

Received 21 July 2015; received in revised form 26 April 2016; accepted 9 May 2016

Abstract

It has often been claimed that the *Tobler–Mussafia Law*, i.e. the ban on sentence-initial clitic pronouns, is based on prosodic properties such as the ban on unstressed monosyllabic words at the sentence beginning (Mussafia, 1886) or the inherent enclitic nature of the respective pronouns (Meyer-Lübke, 1897). More recent research has identified a number of extra-phonological motivations for this clitic placement, making a prosodic explanation seem superfluous. The present study addresses the question whether Old Spanish, a clear Tobler–Mussafia language, differs in its prosodic patterns from Modern Spanish, which does not show the Tobler–Mussafia placement any longer. The comparison of the data shows that Old Spanish tolerates more sentence-initial unstressed monosyllables and unstressed pretonic syllables at the sentence beginning than Modern Spanish does, contrary to expectations. Together with the observation that the direction of clitic attachment is rather due to the prosodic context (i.e. the immediate preceding or following prosodic words and potential phonological phrase boundaries) than to a fixed directionality parameter, this falsifies the hypothesis that the clitic placement pattern in the TML language Old Spanish is due to specific prosodic patterns.

Keywords: Prosody; Tobler–Mussafia Law; Old Spanish; Modern Spanish

1. Introduction

This paper addresses the question whether the so-called *Tobler–Mussafia Law*, a special verb-clitic linearisation found for instance in Medieval Romance, needs a phonological explanation, thus challenging the *Principle of Phonology-free Syntax* (cf. Miller et al., 1997; Pullum and Zwicky, 1988; Zwicky and Pullum, 1986).

The Tobler–Mussafia Law (henceforth TML; cf. Mussafia, 1886:255; Tobler, 1875:1061f.) captures the observation that, although clitic object pronouns may occur either to the left or to the right of their verbal host, they are rarely found in sentence-initial position. The TML is obeyed in the Old Spanish example in (1a),[1] but not in its Modern Spanish counterpart (1b). For convenience, host verbs are underlined and clitics are set in **bold face**.

E-mail address: kuchenbrandt@em.uni-frankfurt.de.

[1] Note that conjunctions like *et* 'and' and *mas* 'or' do not count as sentence-initial constituents in Medieval Romance (cf. already Meyer-Lübke, 1897:315).

http://dx.doi.org/10.1016/j.lingua.2016.05.002
0024-3841/

(1) a. *Et dizen* ***le*** *en=este tiempo . . . Calyz.* (alb 8r-66)
and say CL in=that time . . . Calyz[2]
b. *Y* ***lo*** *llaman en este tiempo Calyz.*
and CL call in that time Calyz
'And they call it at that time Calyz.'

Early explanations motivate this effect through phonological factors such as a ban on unstressed monosyllables at the beginning of a sentence (Mussafia, 1886:257) or the inherent enclitic nature of the pronouns (Meyer-Lübke, 1897:318). Although many studies have argued against a phonological motivation of the TML (for example Benincà, 1995; Fischer, 2002, 2003), some mechanisms relying on prosody are still popular explanations for the special behaviour of Tobler–Mussafia or Wackernagel clitics (cf. the *Prosodic Inversion* proposed by Halpern, 1995; invoked for instance by Barbosa, 2000; Condoravdi and Kiparsky, 2002; or the post-syntactic filter mechanisms introduced by Bošković, 2001; Fontana, 1993; Golston, 1995; Revithiadou, 2006). However, there are few studies that discuss the putative underlying phonological properties within current frameworks (Werle, 2009 is an exception) or compare the prosodic properties of Tobler–Mussafia (+TM) and non-Tobler–Mussafia (−TM) languages. The aim of this paper is therefore to empirically test if the prosodic patterns of a +TM language such as Old Spanish differ significantly from the prosodic patterns of a −TM language like Modern Spanish. The analysis will show that there are even more unfooted syllables and unstressed monosyllables at the beginning of the Old Spanish sentences than at the Modern Spanish ones. This contradicts the hypothesis that the TML is based on prosodic factors such as a ban on initial unfooted syllables.

1.1. The Tobler–Mussafia Law

The Tobler–Mussafia Law is often interpreted as the Romance version of *Wackernagel's Law* (W), which can be defined as follows:

W: Inherently unstressed/unstressable words
(a) are preferentially found in Second Position (P2); and
(b) specifically, they cannot stand in first position (P1).
(Fischer, 2002:26; Wanner, 1991:314)

It is the second part of the Wackernagel Law, the ban on sentence-initial unstressed words, which is the core of the Tobler–Mussafia Law:

TM: Unstressed object pronouns cannot stand in absolute initial position in the sentence.
(Fischer, 2002:27; Wanner, 1991:314)

Although Medieval Romance pronoun position is more complex than this simple definition suggests (cf. Ramsden, 1963 for a very detailed list of placement patterns and Camacho Taboada, 2006:24f. for a summary), I will follow Fischer (2002) and Wanner (1991) and take the non-occurrence in sentence-initial position as the defining property which distinguishes +TM laguages from −TM languages (cf. also Hinzelin, 2007). To be more precise, the crucial phenomenon for the aims of this study is the postposition of weak/clitic pronouns in finite declarative clauses where the finite verb stands in first position (=finite declarative V1 sentences). This is justified by the fact that it is the postposition in exactly this construction that seems to call for a phonological motivation. Recall that without postposition, the clitic pronoun would end up as a sentence-initial weak element (banned according to Mussafia, 1886), and without a host for enclitic attachment (fatal according to Meyer-Lübke, 1897). In sentences with later verb placement (V2 + X), there is always another preverbal constituent preventing the clitic from being initial and acting as a potential phonological host for the clitic. Phonology is therefore not crucial in V2 + X sentences. For most of these cases, a syntactic or morphological explanation is rather straightforward, as clitic pronouns are usually positioned before finite and after non-finite verb forms, with some variation induced by polarity and information structure (cf. sections 3.1 and 4).

There is reason to believe that the TML developed in Early Romance and was inherited by all Romance languages (cf. Ramsden, 1963:19f., 99f.). French seems to be the first language that gave up the TML (around 1300; cf. Ramsden, 1963:103; Wanner, 1991:315), while languages such as Spanish and Italian maintained it throughout the Middle Ages

[2] CL = clitic pronoun; for the remaining abbreviations and conventions see the *Leipzig Glossing Rules* (http://www.eva.mpg.de/lingua/resources/glossing-rules.php).

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

(cf. Fontana, 1993; Gessner, 1893 for Spanish and Benincà, 1995; Mussafia, 1886 for Italian, among many others). Some Modern Romance languages still show the Tobler–Mussafia placement (cf. Fernández-Rubiera, 2013). European Portuguese is a well-known example, although clitic-verb linearisation did change from the old to the modern language (cf. Galves and Sandalo, 2012; Martins, 1994; Sandalo and Galves, 2013).

1.2. Possible prosodic bases for the Tobler–Mussafia Law

Apart from the fact that Tobler–Mussafia clitics are well-attested in many languages belonging to different families (cf. Camacho Taboada, 2006 for a Romace-Slavic comparison), the linguistic motivation for the Tobler–Mussafia placement is still controversial. I will restrict the discussion to possible prosodic reasons why languages might disfavour clitic pronouns in sentence-initial position. For a review of syntactic and discourse-pragmatic factors see Benincà (1995, 2004), Fernández-Rubiera (2013), Fischer (2002, 2003), Legendre (1996), Rivero (1997), Wanner (1991) and the references cited therein, as well as section 4.

The first proposal is Mussafia's claim that sentences should not begin with unstressed monosyllabic words: "[. . .] era un fine sentimento che li faceva rifuggire dall'incominciare la proposizione [. . .] con un monosillabo privo di proprio accento, e quindi di suono e di significato soverchiamente tenne [. . . it was a fine feeling that made them avoid to begin the sentence . . . with a monosyllable without stress, and which would then have too much tone and significance]" (Mussafia, 1886:257; cf. also Foulet, 1919:94 and Ménard, 1968:28 for Old French). Under this view, the beginning of a sentence seems to be prosodically prominent (cf. Wanner, 1996) and therefore reserved for stress-bearing words. It has often been claimed that Latin and Early Romance had a *decrescendo* or trochaic-dactylic sentence rhythm in contrast to the later and Modern Romance *crescendo* or iambic-anapestic prosody (cf. Meyer-Lübke, 1897:334 as well as Adams, 1987; Jacobs, 1994 and the literature cited therein). Within prosodic phonology (cf. Hayes, 1989; Nespor and Vogel, 2007; Selkirk, 1984 and later work), this can be interpreted as the left-/right-headedness of higher prosodic constituents, i.e. the Phonological Phrase and above. While Latin and early Romance were left-headed, the head position switched to the right in the development to Modern Romance.

Meyer-Lübke (1897) objects that Mussafia's (1886:257) ban on initial unstressed monosyllables is too strong because Medieval Romance does tolerate sentence-initial articles and prepositions. He proposes that the unstressed pronouns are inherently enclitic (Meyer-Lübke, 1897:318,[3] cf. also Thurneysen, 1892:301, 303), i.e. they need to lean on a word to their left due to their lexical specification. In modern terms, this means that phonological binding is treated as an idisoyncratic property of an arbitrary class of words, and it is subject to a directionality parameter, as for instance formulated by Klavans (1985) and still maintained by Bošković (2001) and Mavrogiorgos (2013). This approach is problematic for two reasons. On the one hand, authors like Selkirk (1996) and Truckenbrodt (1999) argue that prosody is sensitive to constituent edges and the lexical/functional difference, but otherwise cannot process morphosyntactic information (cf. also the *Indirect Reference Hypothesis* formulated by Inkelas, 1990 or the even more radical *No Reference Hypothesis* advocated for by Šurkalović, 2013, which claims that phonology does not have any access to morphosyntactic information). This means that phonological dependency may be linked to being a functional element, but there is no evidence for postulating phonological binding as an idiosyncratic property of specific lexical categories.[4] On the other hand, phonological directionality parameters have been proposed in phonology during the 1980s and 1990s for various phonological phenomena like assimilation and syllabification (cf. Itô, 1988) but have subsequently been replaced in many analyses by alternative approaches relying on independently motivated structural asymmetries (cf. Beckman, 1998). The most obvious reason against directionality is that it cannot even be defined as a single parameter chosen globally for each language. Instead it requires to be stated for each phonological process separately, because languages often allow both progressive and regressive assimilations. An example is Hungarian, which has progressive vowel harmony but regressive voicing assimilation in obstruent clusters. To exemplify this, compare *perd-ül-és-etek-től* 'from your (pl.) twirling round' and *ford-ul-ás-otok-tól* 'from your (pl.) turning round' (Siptár and Törkenczy, 2007:63). All four suffixes agree in backness with the vowel of the respective stem *perd-* (front) and *ford-* (back), or phrasing it differently, [±back] spreads from left to right. In *kút-ban* [db] 'in (a) well' or *rab-tól* [pt] 'from (a) prisoner' (Siptár and Törkenczy, 2007:78), the first consonant agrees in voicing with the second one, converting the final/t/from *kút* to [d] and the final/b/in *rab* to [p]. Here [±voiced] spreads from right to left. Standard Spanish does not have vowel harmony, but it has voicing assimilation between consonants

[3] Although Meyer-Lübke (1897) describes the unstressed Medieval Portuguese pronouns rather as Wackernagel (second position) clitics, his phonological arguments hold for the TM type as well.

[4] The putative class of clitics often does not even correspond to a specific lexical category. Notorious cases can be found in Slavic languages, where personal pronouns cluster together with negative particles and auxiliary forms (cf. Camacho Taboada, 2006; Werle, 2009 for examples and further references).

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

(like in *isla* [zl] 'island' vs. *asco* [sk] 'disgust', cf. Hualde, 2005:107), which is regressive just as in Hungarian. What all of these assimilations have in common is that the features spread from a prominent position (stem, syllable onset) to a non-prominent one (affix, syllable coda). Incorporating this into the formulation of the rules would not only simplify them, but also explain why vowel harmony, but not voicing assimilation, is progressive. In addition, it motivates why Hungarian and Spanish (and many other languages) show the same direction for voicing assimilation. An analysis in terms of prominence provides therefore more explanatory adequacy than an analysis in terms of simple directionality. Postulating something like inherent enclisis for specific word classes would then reintroduce approaches that have been eliminated for good reasons and lack independent motivation, at least in languages such as Spanish.

Another motivation for the TML could be the avoidance of initial unfooted syllables. In languages like Spanish and Latin, feet are usually binary trochees, i.e. they consist either of two light syllables as in SPA *casa* ['ka.sa] 'house' or of one heavy syllable like in LAT *mens* [me:ns] 'mind'. The initial syllable in words like SPA *tomate* [to.'ma.te] 'tomato' is outside the trochee and too light to form a foot on its own.[5] The resulting structure is a single syllable which skips the level of the foot and adjoins directly to the Prosodic Word (cf. Lleó, 2006 and the references cited therein). Unfooted syllables that are a part of larger words (cf. ***to**mate*) are tolerated by languages like Spanish. Sentence-initial unfooted syllables that stem from monosyllabic function words may be subject to further restrictions. If they are not integrated into a Prosodic Word, they have to skip not only the level of the Prosodic Word, but some higher prosodic level as well. This leads to misalignments between the Prosodic Word and the Phonological Phrase.

1.3. Phonological changes from Latin to Modern Spanish

Word forms and stress patterns changed from Latin to the Modern Romance languages through various phonological processes (see Lapesa and Menéndez Pidal, 2005 for an overview). For the present study, the main point of interest are the metrical patterns. Classical Latin assigned its main stress on the word level according to the so-called Penultima Rule (cf. Allen, 1965:83), i.e. stress fell on the second-to-last syllable if it was heavy as in *cantare* [kan.'ta:.re] 'to sing', which has a long vowel in the penultima, or *cantandus* [kan.'tan.dus] 'singing', where the penultima is a closed syllable. Otherwise it was retracted to the third-to-last syllable as in *canere* ['ka.ne.re] 'to sing', which has only light syllables. The basic foot was a trochee which consisted preferably of a single heavy syllable (see Prince and Smolensky, 2002:38ff. for an early OT proposal for stress assignment and foot structure in Latin). In most cases, the Latin stressed syllables remained the anchor for the main stress in Spanish in the case of directly inherited words. There are some quite regular cases of stress shifts, which concern (i) words in which a hiat with stressed first closed vowel developed into a diphthong (LAT *mulierem* [mu.'li.e.rem] > [mu.'lje.rem] > SPA *mujer* [mu.'xɛr] 'woman') and (ii) words with a supposedly light penultima followed by a plosive-liquid sequence (LAT *integrum* ['in.te.grum] > [in.'te.grum] > SPA *entero* [ɛn.'tɛ.ro] 'whole'; cf. Bullock, 2001). These changes already occurred during the Proto-Romance stage. It is therefore safe to assume that the stressed syllables in the Old Spanish texts correspond to the stress-bearing syllables of their modern equivalents.

The loss of unstressed vowels or the introduction of prothetic vowels could change the number of syllables around the stressed syllable and therefore alter the metrical pattern of the word. While the Latin *spathula* ['spa.tu.la] aligned a metrical foot with the left word edge, its Spanish counterpart avoids the/s/ + consonant cluster by the introduction of a prothetic vowel, yielding SPA *espalda* [es.'pal.ða] 'shoulder'. The result is a single pretonic syllable at the left word edge. In a language like Spanish, the preferred foot is a dysyllabic trochee. Single pretonic syllables can plausibly be analysed as unfooted syllables, i.e. syllables that are directly associated with the Prosodic Word, skipping the level of the Foot (cf. Lleó, 2002). This violates the Exhaustivity constraint of the *Strict Layer Hypothesis* (cf. Selkirk, 1996:190)[6]. A typical symptom of this kind of structure is that young children omit these syllables (cf. again Lleó, 2002; Demuth et al., 2012, among others).

1.4. Basic assumptions and Hypotheses

The text samples under consideration represent Old Spanish and Standard Castilian Modern Spanish. The Old Spanish texts show the effects of the Tobler–Mussafia Law, while the Modern Spanish texts represent a non-Tobler–Mussafia variety.

For Old and Modern Spanish, I will follow the analysis that a single pretonic syllable at the left word edge remains unfooted, and that the preferred foot is a dysyllabic trochee ('σσ). It should be mentioned that Modern Spanish clitics don't

[5] Spanish is not a prototypical quantity-sensitive language, which means that a closed syllable still might not be enough to form a foot. However, monosyllabic words have a strong tendency to contain branching rhymes, cf. *tren* [trɛn] 'train'.

[6] Exhaustivity: No C_i immediately dominates a constituent C_j, $j < i - 1$, e.g. "No PWd immediately dominates a σ." (Selkirk, 1996:190).

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

alter the stress position of their host, but may receive a secondary accent in so-called *sobreesdrújula* patterns (*cuénta**selò*** 'tell it to them', Alcina Franch and Blecua, 1979:444). They are thus always outside of the Prosodic Word of the verb if they form full syllables, although they may be integrated into a recursive Prosodic Word with their host. This is essentially the same analysis as the one proposed by Delais-Roussarie (1999) for Modern French and Monachesi (1996) for Italian. If cliticization is seen as a grammaticalization process from independent demonstrative pronouns to almost affix-like dependent elements, we should not expect the Old Spanish clitics to be prosodically closer to their host than their modern counterparts are. Needless to say, they are function words and don't build independent Prosodic Words, which means that they lack an independent word accent (but cf. Hualde, 2009, who claims that even function words start with a stressable head syllable, but may be lexically specified for prosodic fusion with following words. Fusion then triggers de-stressing of the function word).

If the Tobler–Mussafia Law is motivated by prosodic factors such as the avoidance of initial unstressed syllables or words, the preferred prosodic patterns should differ according to whether the respective languages are subject to the TML or not. More specifically, the −TM language Modern Spanish is expected to tolerate unstressed syllables at the left edge of sentences as well as sentence-initial unstressed monosyllabic words more easily than the +TM language Old Spanish.

2. Material and methods

As a testing ground for the hypothesis, Spanish has been chosen because within the Romance languages, it is an exemplary case of a late +TM to −TM shift (cf. Ramsden, 1963:129f.). Furthermore, it is rather unproblematic as regards its prosodic analysis, and it has been quite conservative with respect to the overall prosodic development. These factors make it a suitable testing ground for the hypothesis that the change in clitic placement is linked to a change in prosodic patterns.

This study analyzes prosodic aspects of mediaeval language. Especially in the case of function words (articles, clitic pronouns, complementizers, …), mediaeval manuscripts show characteristic irregularities. This concerns both vowel realisation vs. deletion (cf. *se* vs. *s* for the reflexive clitic) and the presence vs. absence of word boundaries (cf. *dizen le* vs. *dizenle* '(they) say to him/her'). These alternations provide hints for the phonetic realisation and prosodification of these elements:

> Since no orthographic standard existed for the vernacular languages during the Middle Ages, we have to assume that the authors and scribes wrote their sentences according to how they would have pronounced them. (Fischer, 2002:185)

It is therefore crucial that the text editions represent either graphically faithful versions of the original manuscripts or moderately normalised versions where all changes are documented in such a way that the original representations can be reconstructed. The Old Spanish (OSP) texts under investigation stem from the 13th century and fulfil this requirement: *Canones de Albateni* (alb), *Estoria de Espanna* (est) and *Libro de las leyes* (ley; Kasten and Nitti, 1978). Modern Spanish (MSP) samples are from the newspapers *El ABC* (abc), *El Mundo* (mun) and *El País* (pai).

The analysis focuses on different aspects such as clitic placement, graphical clisis and prosodic patterns. Data on clitic placement in the Old Spanish texts have already been reported in Kuchenbrandt (2009); the overview on clitic placement in Modern Spanish is based on the same excerpts from El ABC, El Mundo and El País which also make up the basis for the metrical analysis. 154 sentences containing clitic pronouns are included; among these, 27 are affirmative V1 sentences. Details on the methods for the prosodic analysis are provided at the beginning of the respective subsections.

3. Results

The first subsection proves that the clitic pronouns in the three Old Spanish texts obey the Tobler–Mussafia Law, while the pattern in the Modern Spanish texts is clearly different. This merely justifies the classification Old Spanish [+TM] vs. Modern Spanish [−TM] without aiming at a deeper discussion of clitic placement. We will then have a look at graphic evidence for the prosodification of the clitic pronouns, testing the hypothesis that TM clitics are strictly enclitic. In the following steps it will be examined if Old Spanish shows different preferences for prosodic patterns than Modern Spanish.

3.1. Clitic position

TM clitics are *head-adjacent* (Billings, 2002) or *categorical* clitics (Camacho Taboada, 2006), i.e. their syntactic host is the head of the phrase in which they occur. In the case of the Romance pronominal clitics, the host is a verb. Only certain

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

other elements like negation, short adverbials or strong pronouns may intervene between a preverbal clitic and the verb (so-called *interpolation*); compare the Old Spanish examples (2a,b). Postverbal clitics are strictly verb-adjacent.[7]

(2) a. *et assi* ***los*** *auemos puesto en las tablas* (alb 6r-76)
and like.this CL have put in the tables
'and in this manner, we put them into the tables'

b. *mas por todo esso no serie padrino*
but for all this not would.be godfather
*aquel que=****l*** *assi touiesse.* (ley 5r-70)
that.one that=CL like.this had
'but for these reasons, that one would not be godfather that had him like this'

Interpolation is ungrammatical in (Standard) Modern Spanish.

Clitic-verb linearisation depends on verb morphology, sentence type and verb position in Old Spanish. Non-finite verb forms usually have postverbal clitics. Negation triggers preverbal position, sometimes even with non-finite verb forms, compare the two verb-clitic linearisations in (3):

(3) *guardando* ***se*** *de no=****l*** *fazer*. (ley 2r-18)
bewaring CL of not=CL do.INF
'bewaring of not doing it'

Postverbal clitics with finite verb forms are almost exclusively found in Old Spanish main clauses (4a), but hardly ever in subordinate ones ([4b] is one of the rare cases).

(4) a. *. . .e depues fueron* ***se*** *alongando a*
. . . and after they.went CL alongside to
un rio grand (est 3v-95)
a river big
'and after that they left, following a broad river'

b. *Ca tan grand es la uertud d=estas*
for this big is the virtue of = these
palabras. q^{ue} *tanniendo el agua de fuera*
words. that purifying the water from outside
al cuerpo; laua ***se*** *el alma por*
to.the body; washes CL the soul through
e^{n}*de de de*^{n}*tro.* (ley 4v-49)
this from inside.
'For the power of these words is so strong, that the soul cleanses from the inside by purifying the body from the outside.'

In Modern Spanish, clitic-verb linearisation depends on the morphological properties of the verbal host. Clitics are preverbal with finite forms (cf. 5a) and postverbal with infinitives, gerunds and imperatives (cf. 5b). Postverbal clitics with finite verb forms are restricted to formulae like *véa****se*** *abajo* 'see below'.

(5) a. *. . ., y* ***lo*** *seguimos leyendo*
. . ., and CL continue reading
compulsivamente. (abc murakami 08–10)
compulsively
'..., and we continue reading it compulsively.'

[7] Note that the Cl V/V Cl linearisation is traditionally referred to as *proclisis* and *enclisis*, respectively. Throughout the paper, I will use the terms *preverbal* and *postverbal* to refer to the (morpho-syntactic) clitic-verb linearisation and reserve the terms *proclisis* and *enclisis* (and their derived forms) to the graphical and supposedly phonological binding. Morpho-syntactic order and prosodification are two distinct phenomena, so they should be kept apart terminologically (cf. Klavans, 1985; Fischer, 2002, 2003; Hinzelin, 2007). Needless to say, under the here adopted view, syntax feeds phonology, and therefore syntax may put a clitic into such a position that it will end up as first or last element in its prosodic domain. In those cases, there is no other choice than to prosodify the clitic as proclitic or enclitic, respectively.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

b. . . . *y casi llega a*
. . . and almost arrives at
desesperar=***nos***. (abc murakami 06-02)
make.desperate=us
'. . . and he almost manages to frustrate us.'

The relevant context for the Tobler–Mussafia Law are verb-initial (V1) declarative finite sentences. V1 can be defined either syntactically or phonologically. In the first case, a sentence is V1 if the verb is its first constituent (apart from potentially preceding coordinating conjunctions), or if it is the first constituent in a coordinated sentence (see the Old Spanish examples in [6] and the Modern Spanish one in [7]).

(6) a. *Et dizen* ***le*** *en=este tiempo . . . Calyz.* (alb 8r-66)
and say CL in = this time . . . Calyz
'And they call it at that time Calyz.'

b. *Et posieron a cada .xv. grados . . . un*
and set to every 15 grades . . . one
officio . . . & ***y se*** *cumplen estos .vj. officios . . .* (alb 6r-11)
house . . . & CL CL fulfil these 6 houses . . .

'And they set at every 15 grades a house, and here these six houses are completed.'

(7) . . ., *y* ***me*** *parecieron dos libros menores.* (abc murakami 02-02)
. . ., and CL seemed two books minor.PL
'..., and they appeared to me as two minor books.'

In the second case, V1 means that the verb is the first constituent after a prosodic break (probably a Phonological Phrase boundary, cf. Patin et al., 2013, and the references cited therein), i.e. after a dislocated constituent, an embedded sentence or a constituent that contains an embedded sentence. Example (4b) is an example for a prosodically defined V1 context in an Old Spanish subordinate clause. In (8a), two finite verbs are coordinated inside a relative clause, which places the second verb directly after a coordinating conjunction. The latter is claimed not to be a suitable host for clitics, which gives rise to another case of phonological V1. (8b, 9) represents a V1 context in a main clause after a subordinate clause. These cases may not qualify as V1 according to the syntactic definition, but they are the most important contexts under the view that the TML is motivated by prosody, i.e., that Phonological Phrase-initial clitics are disallowed.

(8) a. *los grandes males que nascien &* ***se***
the big evils that were.born & CL
leuantauan entre las gentes (ley 1r-47)
arose between the people
'the great evils that emerged and arose among the peoples'

b. *& lo que fuere d=ell menguar*=***lo*** *as* (alb 3v-67)
& that what would.be from=it to.subtract=CL have
'and what you got from this, you will subtract it'

(9) . . . *y cada vez que hay concierto* ***me*** *voy*
. . . and every time that there.is concert CL go
a casa de mi hermana . . . (mun concierto 07-04)
to home of my sister . . .
'. . . and whenever there is a concert, I go to my sister's place . . .'

As Fig. 1 shows, the Old Spanish texts show TM effects: the preferred linearisation in declarative V1 clauses is V Cl. However, this pattern is not categorical (see [6b] and [8a] above). This is no unusual finding, as exceptions are reported for 'prototypical' Tobler–Mussafia and Wackernagel clitics elsewhere (cf. Camacho Taboada, 2006). Note that Old Spanish shows a preference for preverbal clitics in subordinate V1 contexts, mirroring the typical main-subordinate asymmetry of TM languages. This means that the typical TM pattern is a main clause effect, as already observed by Gessner (1893:34ff.), but neither a general property of verb-initial sentences nor a mandatory principle at the left edge of a Phonological Phrase. As expected, the Modern Spanish data show invariable preverbal positioning in declarative V1

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

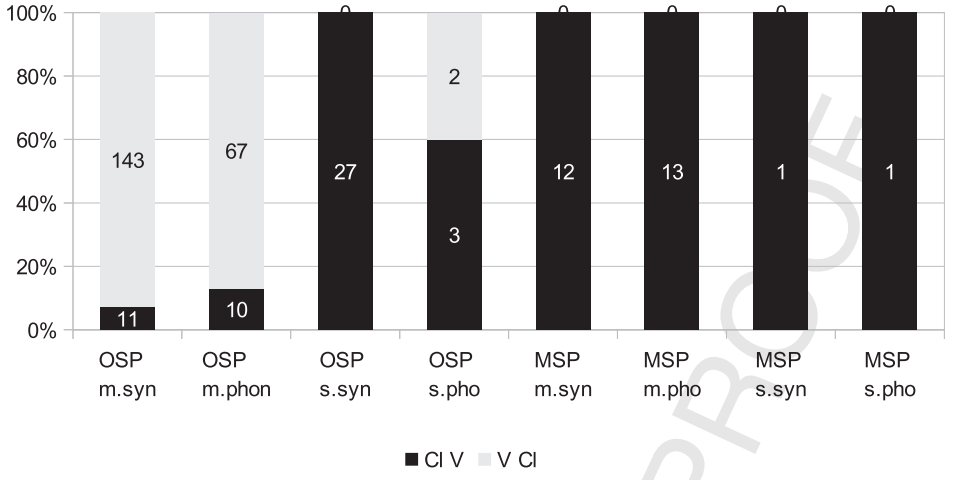

Fig. 1. Clitic-verb linearisation in declarative V1 contexts (Old and Modern Spanish); syntactically (syn) and phonologically (pho) defined contexts in main (m) and subordinate (s) clauses; absolute numbers (Old Spanish data from Kuchenbrandt, 2009).

contexts, as Modern Spanish belongs to the *finiteness sensitive* type, as Mavrogiorgos (2013) puts it. Postverbal placement occurs with imperatives, infinitives and participles.[8] For a more detailed overview see Zagona (2003:15ff., 184ff.).

3.2. Directionality of binding

According to Meyer-Lübke (1897:314) and his followers, TM clitics are inherently enclitic, i.e. they always lean on a host to their left. Although the phonological representations are not directly accessible in written records, it is possible to find some hints based on seeming inconsistencies and irregularities. Wanner (1996:565) complains that ''[...] medieval scribal practice [...] does not respect word separation to any degree of regularity''. However, the emerging Old Romance languages inherited their alphabet, its general grapheme-phoneme correspondences and the marking of word boundaries from Latin. During the 13th century, Spanish phonology did not change drastically, therefore scribal conventions could consolidate. Variations occurred mainly in the domain of determiners, prepositions and pronouns (cf. Meisenburg, 1996:67), offering a possibility to deduce their binding preferences. The three texts under consideration indeed show rather constant spellings except for word boundaries between the aforementioned word classes and neighbouring words. I therefore assume that writing a clitic pronoun in a graphical unit with the preceding or following word (let's call this *graphic clisis*) is an indication of its perceived prosodification with the preceding or following word.

In order to keep things as neat as possible, I will use direct positive evidence only: a X = Cl pattern hints at enclisis and a Cl = Y pattern at proclisis, while graphic mesoclisis (X = Cl = Y) and independence (X Cl Y) do not tell us anything about the direction of prosodification. Furthermore, graphic independence does not imply that the respective clitics are supposed to build Prosodic Words. They do prosodify with some other word, but they don't tell us directly with which one. One might try to deduce the prosodification directly from syntactic structures, but this is risky, as prosodic constituents need not be isomorphic with syntactic phrases, and prosodic phrasing is quite flexible (cf. Delais-Roussarie, 2000; Nespor and Vogel, 2007; Patin et al., 2013; Post, 2000; Prieto, 2006, and many others). Another direct indicator for binding preferences may be an alternation in the graphical representation of the clitic forms like vowel drop (i.e. *se* ∼ *s*) or gemination (i.e. *se* ∼ *sse*). These effects occur exclusively with graphic clitics in the texts under investigation, but never with graphically independent forms. Therefore, this does not offer additional evidence for the direction of binding.

Binding direction in Old Spanish has been analysed on the basis of 1000 clitics, which have been extracted in equal distribution across the three texts. We find graphic enclitics (10a) as well as proclitics (10b) and some cases of mesoclitics (10c). The most frequent case, however, is the graphic independence of the clitic (10d). The orthographic norm for Modern Spanish prescribes graphic enclisis for postverbal clitics (11a) and independence for preverbal ones (11b).

[8] The absolute numbers for Modern Spanish are low, but they are only included for the sake of illustration. As clitic placement is categorical in Modern Spanish, even one example per case would be sufficient to make the point.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

(10) a. *& salua=**sse** por el.* (ley 5r-29)
& save=CL through him.
'and by this he is saved.'

b. *. . . q^ue yo en=tal punto **m**=ayuntasse contigo.* (est 27r-46)
. . . that I in=such point CL=ally with.you.
'. . . that I ally with you at such point'

c. *Et reboluer=**s**=an las sombras de los cathetes . . .* (alb 07v-23)
And turn.INF=CL=have the shadows of the cathetus
'And the cathetus' shadows will turn around'

d. *. . . no^n **se** pueden sabre . . .* (alb 04r-69)
. . . not CL can know.INF . . .
'they cannot be known'

(11) a. *. . . invitándo**le** a buscar . . .* (mun sanz 02-01)
. . . inviting = CL to search . . .
'. . . inviting him/her to search . . .'

b. *. . ., que **se** celebra . . .* (pai libros 00-UT)
. . ., that CL celebrate . . .
'. . ., that is celebrated . . .'

As can be seen in Fig. 2, graphic independence (X Cl Y) is the most frequent case in all texts. As for graphic clisis, the enclitic variant (X = Cl) is the only one in Modern Spanish orthography and the dominant pattern in the Old Spanish texts. It seems to be the case that Old Spanish clitics preferably cliticise to a preceding word, but this is by no means an absolute rule, as the reverse pattern can be observed (see [10b] for proclisis). This deviant pattern is found especially when the clitics occur together with other weak function words like auxiliaries, giving rise to a graphically independent function word cluster. The directionality of binding is therefore not categorical, but depends on the prosodic context of the clitic (i.e. the presence/absence of adjacent prosodic words, phonological phrase boundaries, etc.). Together with the observation that Old Spanish clitics do appear immediately after a prosodic break (see the prosodically defined V1 subordinate contexts, cf. Fig. 1), this falsifies the hypothesis of inherent enclisis in the TM case and of a fixed binding direction in general.

One might suspect that the Modern Spanish orthography norm mirrors a closer phonological binding of postverbal clitics in comparison to the somewhat more independent preverbal ones. This kind of asymmetry is related to the so-called *Suffixpräferenz* (cf. Wandruszka, 1992), invoked by Meisenburg (2000) for an explanation of the still not fully grammaticalized French clitics (cf. Himmelmann, 2014 for a discussion of its underlying motivation). However, close listening to actual spoken Spanish reveals fused forms like *la ama* [lama] 's/he loves her', where the clitic is tautosyllabic with the beginning of its host, just like in the Old Spanish example (10b) ***m*** = *ayuntasse* 'I ally (subj.)'. In these cases, a prosodification as an internal clitic in the sense of Selkirk (1996) would be plausible (but see Cardinaletti and Repetti,

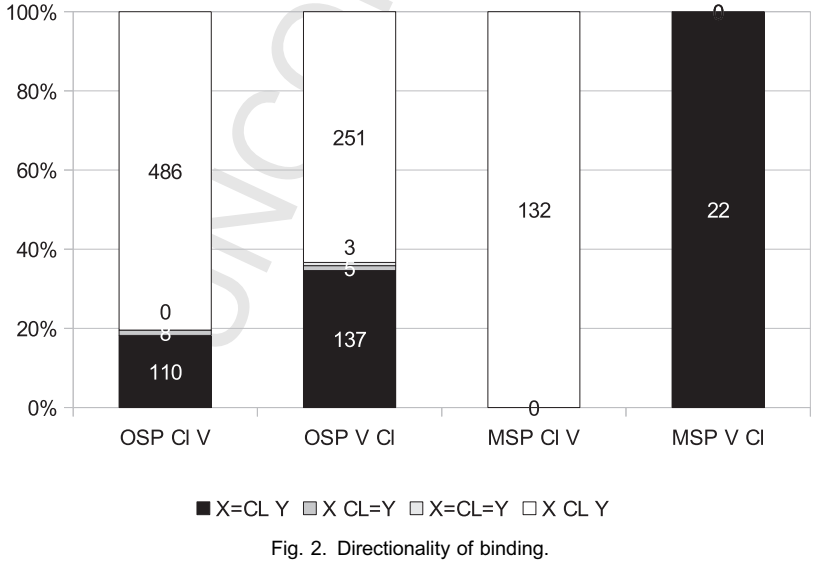

Fig. 2. Directionality of binding.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

2008, 2009 for alternatives). It is therefore unclear whether we can maintain a categorical preverbal-postverbal asymmetry with respect to the strength of phonological binding. Luís (2014) argues that Spanish clitics always attach morphologically, regardless of being preverbal or postverbal, in contrast to European Portuguese clitics, which attach morphologically in postverbal position, but select a phrasal host if occurring preverbally. We will therefore assume that Modern Spanish clitics may encliticise as well as procliticise with potentially the same closeness of attachment.

3.3. Prosodic patterns

We now turn to the question whether Old and Modern Spanish differ with respect to their sentence-initial prosodic patterns. The prosodic motivation of sentence-initial V Cl linearisation instead of a Cl V order means the avoidance of sentence-initial unstressed monosyllabic function words according to Mussafia (1886:257), which will most likely be prosodified outside the stem of their verbal host as unfooted syllables. This avoidance of initial unfooted syllables should be a general tendency in the language, i.e. detectable in sentences with and without verbs in first position and/or clitics.

3.3.1. Initial unstressed monosyllables

We will first take up Mussafia's ban on sentence-initial unstressed monosyllables. One objection against this argument was that the ban holds exclusively for clitic pronouns while initial prepositions and articles are tolerated even in +TM languages (Meyer-Lübke, 1897). A crucial difference between Romance clitic pronouns and other weak function words like prepositions and articles is that clitics are relatively free to occur to the left or to the right of their host, but the position of prepositions and articles is fixed within their phrase. The same holds for conjunctions. One can prevent clitic pronouns from occurring sentence-initially with the typical postverbal positioning observed in the TM case. If we want to keep prepositions and articles from the sentence-initial position, we have to avoid PPs and determined DPs as first constituents. This should be principally possible. Furthermore, we are not forced to use conjunctions or monosyllabic adverbs at all. This means that there is always a chance to keep the proportion of initial unstressed monosyllables low if this is really the preferred pattern of the language.

In order to test whether the proportion of initial unstressed monosyllables depends on the language type, 500 sentence beginnings per language have been analysed. They had to be either truly sentence-initial or to start after a prosodic break, indicated graphically by punctuation (see the definition of prosodic V1 in section 3.1). Sentences which contained clitic pronouns to the left of the first stressed word have been excluded to prevent the clitic position from influencing the general pattern.

Among the sentence-initial monosyllables, we find lexical categories (nouns, verbs, adjectives), demonstratives, strong pronouns and numerals which should build independent Prosodic Words despite being monosyllabic. They are therefore stressable and should be fine in initial position. Prepositions (abbreviated as P) are sometimes regarded as lexical categories as they participate in word formation processes, but the monosyllabic ones are often said to cliticise to a following word (cf. Ghini, 1993; Nespor and Vogel, 2007; Selkirk, 1996:187; Werle, 2009:238) which is the typical prosodic behaviour of function words. I regarded them therefore as unstressed monosyllables (see [12]). Other unstressed monosyllabic words are adverbs[9] (13), auxiliary and copula verbs (14), complementizers (15), determiners (D [16]), negation particles (17), and coordinating conjunctions (summarised as *&*, see [18]).

(12) a. *De asia e de affrica* … (est 03r-039) 'Of Asia and of Africa …'
b. *De los más de 600 vídeos* … (mun sanz 07-01) 'Out of the more than 600 videos …'

(13) a. … *tal commo los cielos* … (alb 02v-010) '…, such like the skies …'
b. …, *tal como se desprende* … (mun inmigrantes 02-02) '…, as can be learned …'

(14) a. … *fue echado* … (est 03r-010) '…, (he) was thrown …'
b. …, *ha asegurado* … (abc buenavista 02-01) '…, he assured …'

(15) a. …; *que fagan* … (ley 01r-040) '…, that they do …'
b. *Que los ánimos* … (pai cine 01-04) 'That the moods …'

[9] The status of adverbs is a bit fuzzy. While polysyllabic derived ones like SPA *exactamente* 'exactly' figure among the lexical categories in Aronoff (1976) and behave like independent Prosodic Words, the adverbs that are relevant here are monosyllabic ones like *tal* 'such'. At least in the modern languages, they can be stressed, but they are not necessarily so. I therefore assume that their stress is context-dependent and not an independent word stress. In a certain way, they parallel the case of the aforementioned prepositions.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

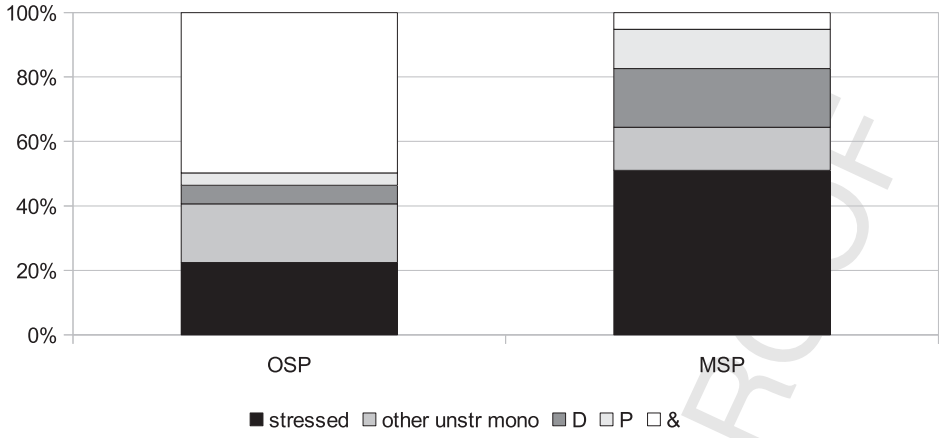

Fig. 3. Proportions of polysyllables/stressed monosyllables vs. unstressed monosyllables, *&* included.

(16) a. *Los primeros partieron* . . . (alb 02v-033) 'The fist ones left . . .'
b. *La novela* . . . (abc murakami 03-03) 'The novel . . .'

(17) a. . . .; *non deuen* . . . (ley 01v-061) '. . . they must not . . .'
b. *No en vano* . . . (abc lectura 04-02) 'Not in vain . . .'

(18) a. . . .. *& dotras cosas muchas* . . . (est 02v-008) '. . ., and from many other things . . .'
b. *Y en estos años* . . . (mun concierto 07-01) 'And in those years. . .'

The first striking aspect is the very high proportion of *&* in the Old Spanish texts (249/500 = 49.8%), which substancially contributes to a higher proportion of unstressed initial monosyllables in Old Spanish (388/500 = 77.6%) in comparison to Modern Spanish (245/500 = 49.0%). This difference is statistically significant (χ^2 = 88.0242, df = 1, $p < 0.001$*) (Fig. 3).

One might wonder whether these elements should really be regarded as part of the sentence. On the one hand, they do not influence clitic placement (see also Note 1), on the other, they do cliticize onto the following word (cf. Wanner, 1991:325), that is, they must be part of the prosodic unit formed by the sentence. Furthermore, they may even form graphic units with clitics like in the following examples from *Estoria de Espanna* and *Libro de las leyes* (Fontana, 1993:30, 154 cites similar cases from *General Estoria*, *Estoria de Espanna* and *Gran Conquista de Ultramar*):

(19) a. . . . *y=**s*** *apoderaua* *d=ella* (est 05v-025)
. . . and=CL took.possession of=her
'... and took possession of her'
b. . . . *e=**l*** *da* *esfuerço* . . . (ley 4v-23)
. . . and=CL gives strength . . .
'. . . and gives him strength . . .'

In order to check whether different proportions of initial unstressed monosyllables are due to *&*, I conducted the same comparison excluding this category. Without *&*, Old Spanish has 55.4% (139/251) initial unstressed monosyllables, while we find 46.2% (219/474) in Modern Spanish. The difference is still significant (χ^2 = 5.5277, df = 1, p = 0.019*) (Fig. 4).

The data do not show evidence for a ban on initial unstressed monosyllables in +TM languages, because Old Spanish shows higher proportions of unstressed monosyllabic words at the beginning of the sentence than Modern Spanish does, even if we exclude sentences beginning with *&* from the analysis.

3.3.2. Sentence-initial prosodic patterns

Recall that word stress falls on one of the last three syllables in Spanish, and the preferred foot form is the dysyllabic trochee ('σσ). Words with an even number of pretonic syllables like *cinematográfico* 'cinematographic' should build up structures where all syllables on the left of the main stress are parsed into feet ($cine_{Ft}$ and $mato_{Ft}$ in this case). Words with an uneven number of pretonic syllables like *características* 'characteristics' could be parsed in at least two ways, viz. with an initial unfooted syllable (ca_{σ} + $racte_{Ft}$) or with an internal unfooted syllable ($carac_{Ft}$ + te_{σ}). While it is possible to establish the exact metrical structure in the spoken languages on the basis of phonetic cues, this issue is difficult to solve

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

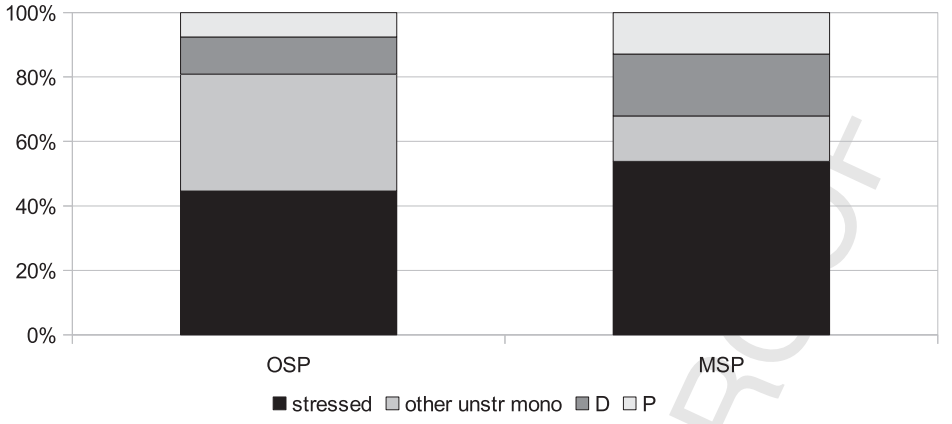

Fig. 4. Proportions of polysyllables/stressed monosyllables vs. unstressed monosyllables, & excluded.

for the Old Spanish stages. The same ambiguity holds for sentence-initial patterns, which might also be word-initial patterns or resulting from sequences of lexical categories with preceding functional categories. I therefore restricted the analysis to metrical patterns with maximally two pretonic syllables, which will give rise to unambiguously footed or unfooted initial syllables. Initial footed syllables are parsed as $(\text{'}\sigma\ldots)_{Ft}$, like in (20), or as $(\sigma\sigma)_{Ft}(\text{'}\sigma\ldots)_{Ft}$, like in (21). Unfooted initial syllables can be represented as $\sigma(\text{'}\sigma\ldots)_{Ft}$, like in (22).

(20) a. *% Otras yslas* . . . (est 03v-001) 'Other islands . . .'
b. *Leo «Baila, baila, baila»* . . . (abc murakami 01-01) 'I read «Dance, dance, dance» . . .'

(21) a. *% Et fallaron* . . . (alb 02v-066) 'And they found . . .'
b. . . ., *y trató* . . . (pai cine 06-02) '. . ., and he tried . . .'

(22) a. *A dios* . . . (ley 01r-017) 'To God . . .'
b. *De hecho* . . . (mun concierto 03-05) 'In fact . . .'

Under the hypothesis that the TML is due to a ban on unfooted sentence-initial syllables, −TM languages like Modern Spanish are expected to tolerate the metrical pattern in (22) more easily than +TM languages like Old Spanish do. From the 500 sentence beginnings per language, all cases with maximally two unstressed syllables to the left of the first possible word stress were extracted. The sentences introduced by coordinating conjunctions (&) do not automatically lead to a much higher proportion of unfooted initial syllables, because & and a following unstressed monosyllable or & plus a polysyllabic word starting with a single unstressed syllable may just constitute a potential foot preceding the first stress in the sentence, like in (23) and (24).

(23) a. *Et son puestos* . . . (alb 02v-026)
and are put.PL
'And they are put . . .'
b. . *e comie^{n}çan*. . . (est 03v-003)
. and begin.PL
'And they begin . . .'

(24) a. . . ., *y sin duda* . . . (abc murakami 06-01)
. . ., and without doubt . . .
'and undoubtedly . . .'
b. . . ., *e incluso* . . . (mun fonelas 02-02)
. . ., and even . . .
'. . ., and even . . .'

As Fig. 5 shows, a difference between Old and Modern Spanish can be observed, although it is not far as dramatic as the one we saw in the previous section.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

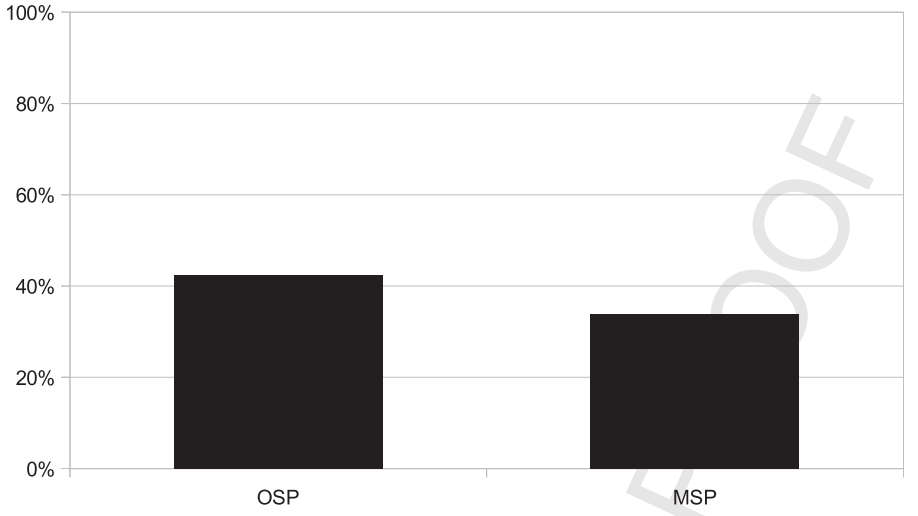

Fig. 5. Sentence-initial unfooted syllables (sentences beginning with *&* included).

Modern Spanish has a relatively low rate of unfooted syllables at the sentence beginning (131/388 = 34%), while in Old Spanish we find 42% (158/372). Pearson's Chi-squared test indicates a significant difference between Old and Modern Spanish (χ^2 = 6.114, df = 1, p = 0.013*).

One might wonder to what extent the excluded data can shift the outcome. If all of them turned out to be plausibly analysed as initially footed cases, proportions would change to 32% (158/500) unfooted syllables in Old Spanish and 26% (131/500) in Modern Spanish. This difference is marginally significant (χ^2 = 3.5478, df = 1, p = 0.060). If the excluded cases were rather to be counted as unfooted syllables, the proportions would be 57% (286/500) for Old Spanish and 49% (243/500) for Modern Spanish, which results in a clearly significant difference (χ^2 = 7.421, df = 1, p = 0.006*).

In a second analysis, I excluded the sentences beginning with *&*. The picture changes only minimally (see Fig. 6). Modern Spanish stays at 34% (126/374), Old Spanish has 47% (100/214). Again, the statistical comparison of Old and Modern Spanish indicates a significant difference (χ^2 = 9.780, df = 1, p = 0.002*).

Including the unclear cases as instances of footed syllables gives the following results: 40% (100/251) sentence-initial unfooted syllables for Old Spanish and 27% (126/474) for Modern Spanish, which is a highly significant difference (χ^2 = 13.445, df = 1, p < 0.001*). Including them as unfooted syllables shifts the results to 55% (137/251) unfooted syllables in Old Spanish and 48% (226/474) in Modern Spanish, which is still a marginally significant difference (χ^2 = 3.127, df = 1, p = 0.077). In sum, regardless of whether we restrict the analysis to the unambigous cases only or whether we include the doubtful cases either as footed or as unfooted syllables, the result is an at least marginally higher

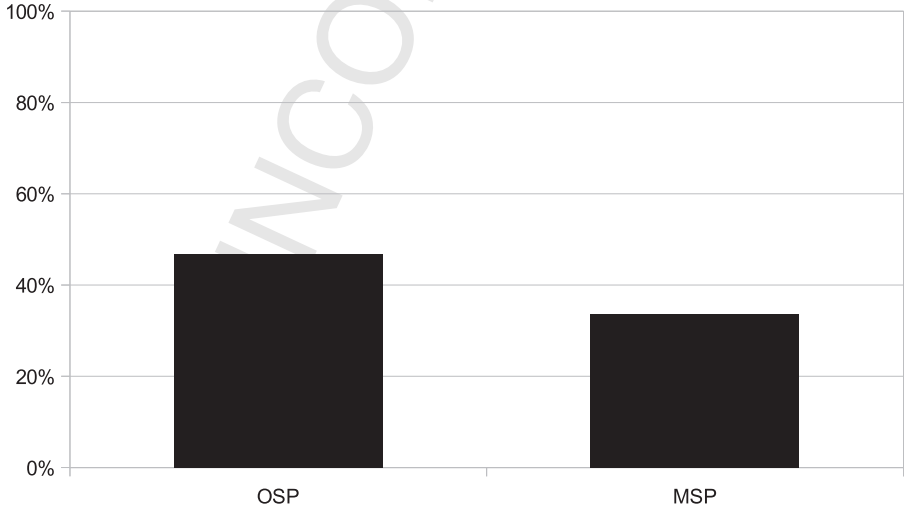

Fig. 6. Sentence-initial unfooted syllables (sentences beginning with *&* excluded).

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

Table 1
Summary of findings.

A.	Clitic placement +TM: Old Spanish −TM: Modern Spanish
B.	Clitic prosodification: Old Spanish: enclitic (preferred), proclitic (attested) Modern Spanish: enclitic/proclitic
C.	Proportion of sentence-initial unstressed monosyllables (both with and without *&*): Old Spanish > Modern Spanish
D.	Percentage of unfooted syllables at the left edge of sentences (both with and without *&*): Old Spanish > Modern Spanish

proportion of initial infooted syllables in Old Spanish in comparison with Modern Spanish. This result stands in sharp contrast to the supposed avoidance of initial unfooted syllables in the +TM language Old Spanish.

3.4. Summary of results

The analysis has shown that the Old Spanish texts *Canones de Albateni*, *Estoria de Espanna* and *Libro de las leyes* show the typical Tobler–Mussafia positioning of clitic pronouns, i.e. sentence-initial clitics are avoided although preverbal clitics are frequent in non-V1 contexts. As regards graphical hints to phonological binding, Old Spanish shows clear preferences, although the directionality of binding is not categorical. The comparison of prosodic patterns revealed differences between +TM and −TM, but not in the expected direction. Table 1 summarises the results.

4. Discussion

We started with the hypothesis that the preferred prosodic patterns of a +TM language such as Old Spanish differ from the prosodic patterns of a −TM language such as Modern Spanish, because prosody is a still popular motivation for the Tobler–Mussafia Law. More precisely, Old Spanish should tolerate initial unfooted syllables and initial unstressed monosyllables less easily than Modern Spanish does. This effect should be visible especially at the left edge of sentences. The analysis indeed revealed different preferences in the prosodic patterns of Old and Modern Spanish, but they do not point into the expected direction. Old Spanish has more sentence-initial unfooted syllables than Modern Spanish. As could be shown, this effect is not due to the Old Spanish habit of starting virtually every sentence with *E*/*et*/*y*/*&*, because the difference remains significant if these items are factored out. If we expect an interaction between ±TM and other typological differences, we want to prove that Old Spanish tolerates *less* unfooted syllables and initial monosyllables than Modern Spanish does. Instead, the data showed that the Old Spanish texts have *more* unfooted sentence-initial syllables than the Modern Spanish texts. On this basis, it is impossible to argue that the TML in Old Spanish is due to a ban on sentence-initial unfooted syllables. The only plausible conclusion is that the Tobler–Mussafia Law is not conditioned by prosody.

But what is the reason for this peculiar placement of pronominal clitics? As section 3.1 and the abundant literature on Tobler–Mussafia languages show, the obvious factors that influence the placement of the pronominal clitics in a +TM language like Old Spanish are (a) the sentence type (main vs. subordinate), (b) information structure (presence of topicalized/focalised constituents at the sentence beginning), (c) polarity (affirmation vs. negation) and finally (d) verb inflection (finite vs. infinite). This means that the properties of the sentence itself are at least as relevant for clitic placement as the morphological properties of the verbal host–unlike in Modern Spanish, where verbal morphology alone determines the clitic position, regardless of the sentence type.

Subordination, sentence-initial focus and negation trigger preverbal placement in +TM languages, sometimes even in non-finite constructions. Some +TM languages allow postverbal clitics in subordinate finite clauses (cf. Fernández-Rubiera, 2013 for Asturian and Fischer, 2003 for Old Catalan). Apart from these languages, finite verbs with postverbal clitics are attested in declarative main sentences only, but they are not restricted to V1 structures. We therefore need an explanation for the fact that both linearisations are possible in V2 + X main clauses[10] and in some languages even in

[10] We should not forget that even in V1 main clauses, Cl V linearisations may occur, albeit rather marginally.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

subordinate clauses. These cases escape the traditional prosodic accounts anyway, because there is a potential phonological host to the left of the clitic-verb sequence. As both Fernández-Rubiera (2013) and Fischer (2003) observe, variation between Cl V and V Cl linearisation in otherwise parallel constructions is not random but correlates with special interpretations of the proposition, which is a difference between [+conviction] and [−conviction] for Fernández-Rubiera (2013) and between ''neutral affirmation'' and ''emphatic affirmation'' for Fischer (2003). All of these factors – conviction, polarity, information structure, subordination – are properties of the higher functional projections of the sentence, especially of the so-called *left periphery* (cf. Rizzi, 1997). It seems thus most likely that the properties of these projections control the clitic-verb linearisation in +TM languages. Fontana (1993) and Rinke (2003), among others, report considerable changes in the left periphery during the development from Old Spanish/French to the modern languages, which had an impact on various syntactic phenomena and most probably on clitic-verb linearisation, as well. Simply speaking, the crucial change from Old to Modern Spanish is most plausibly a change in the left periphery of the sentence. The relevant functional projections are no longer able to attract the finite verb, therefore V Cl linearizations do not arise any longer.[11] A syntactic explanation for the Tobler–Mussafia Law and its disappearance in Spanish seems therefore fully motivated and far more plausible than a prosodic one.

5. Conclusions

In the present study, I investigated whether a language which is subject to the Tobler–Mussafia Law (Old Spanish) differs in its preferred prosodic patterns from a language which does not obey the TML (Modern Spanish). The investigation of the metrical patterns showed that Old Spanish tolerated sentence-initial monosyllables more easily than the Modern language does, contrary to expectation. I therefore conclude that the TML is not prosodically motivated. This is in line with the *Principle of Phonology-free Syntax* (Miller et al., 1997; Pullum and Zwicky, 1986, 1988; Zwicky and Pullum, 1986) and the *Indirect Reference Hypothesis* (Inkelas, 1990), which state that syntax and phonology are separate modules which interact only indirectly (cf. Šurkalović, 2013 for an even more radically modular approach). More specifically, syntax is ''blind'' for phonological information, while phonology reads off syntactic information only indirectly via the mapping between certain syntactic and prosodic constituents. In this sense, the present findings show that syntax does not mind in which way the preverbal or postverbal positioning of clitic pronouns influences the prosodic patterns at the beginning of a sentence.

The analysis of sentence-initial unfooted syllables was centred on the uncontroversial cases with maximally two pretonic syllables. The inclusion of the controversial cases either as footed or as unfooted syllables did not alter the overall picture. Although a better understanding of the prosodification in structures with three and more pretonic syllables might still change the outcomes, there is good reason to believe that this will not result in a radically different outcome.

6. Primary sources

6.1. Old Spanish

alb Canones de Albateni,
est Estoria de Espanna,
ley Libro de las leyes, all from

Kasten, Lloyd & John Nitti (eds.). 1978. *Concordances and texts of the Royal scriptorium*: *Manuscripts of Alfonso X, El Sabio*, [Microfiche ed.] (Spanish series 2). Madison, Wis: Hispan. Seminary of Medieval Studies.

6.2. Modern Spanish

El ABC

- EFE. Buena Vista Social Club vuelve a grabar un disco y sale de gira por Europa. September 21, 2012. (= abc buenavista)
- Ibáñez, Andrés. «Baila, baila, baila», el último Murakami. September 17, 2012. (= abc murakami)
- Sánchez, Ana I. El PP insta al Gobierno a aprobar un Plan de Fomento de la Lectura. April 23, 2013. (= abc lectura)

[11] In Minimalist terms (Chomsky, 1993 and later work), this could be analysed as a change from strong to weak features on a functional projection hosting polarity features, for instance ΣP (cf. Laka, 1990; Martins, 1994, 2002).

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

El Mundo

- Amón, Rubén. Casi 300 detenidos en el desalojo de un campo de inmigrantes en Francia. September 22, 2009. (= mun inmigrantes)
- Hernández, Virginia. 'Se puede estar 30 años ahí sin hacer concesiones'. December 07, 2011. (= mun concierto)
- Puertas, María José. Los yacimientos de Fonelas: el 'mundo perdido' de Granada. September 24, 2009. (= mun fonelas)
- Valdes-Valle, Lissette. Alejandro Sanz encuentra el paraíso junto a Alicia Keys. September 22, 2009. (= mun sanz)

El País

- García, Rocío. Ley del cine, la batalla que no cesa. September 22, 2009. (= pai cine)
- Montañés, José Ángel. Libros en busca de una segunda vida. September 24, 2012. (= pai libros)
- Anonymous. Zelaya advierte de que ''nadie le volverá a sacar'' de Honduras. September 22, 2009. (= pai zelaya)

Acknowledgements

I am indebted to the audience of the *XXXI. Romanistentag 2009*, Sektion 'Syntaktischer Wandel in den romanischen Sprachen' and specifically to Artemis Alexiadou, Susann Fischer, Georg Kaiser, Guido Mensching, Cecilia Poletto and Esther Rinke as well as to the anonymous reviewers, whose feedback, comments and corrections helped to improve the manuscript. All remaining errors are of course mine.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

Adams, M., 1987. From Old French to the theory of pro-drop. Nat. Lang. Linguist. Theory 5, 1–32. http://dx.doi.org/10.1007/BF00161866 (accessed 10.07.13).
Alcina Franch, J., Blecua, J.M., 1979. Gramática española. Ariel, Barcelona.
Allen, W.S., 1965. Vox Latina: A Guide to the Pronunciation of Classical Latin. Cambridge University Press, Cambridge.
Aronoff, M., 1976. Word Formation in Generative Grammar (Linguistic Inquiry Monographs 1). MIT Press, Cambridge.
Barbosa, P., 2000. Clitics: a window into the null subject property. In: Costa, J. (Ed.), Portuguese Syntax. New Comparative Studies (Oxford Studies in Comparative Syntax) Oxford University Press, Oxford, pp. 31–93.
Beckman, J.N., 1998. Positional Faithfulness. University of Massachusetts/Rutgers Optimality Archive, Amherst ROA-234. http://roa.rutgers.edu/article/view/244 (accessed 10.07.13)
Benincà, P., 1995. Complement clitics in Medieval Romance: the Tobler–Mussafia Law. In: Battye, A., Roberts, I.G. (Eds.), Clause Structure and Language Change (Oxford Studies in Comparative Syntax). Oxford University Press, New York, pp. 325–344.
Benincà, P., 2004. The left periphery of Medieval Romance. Studi Linguist. Filol. Online 2 (2), 243–297, http://www.humnet.unipi.it/slifo/2004vol2/Beninca2004.pdf (accessed 02.03.15)
Billings, L.A., 2002. Phrasal clitics. J. Slavic Linguist. Festschr. Leonard Babby 9 (2), 53–104.
Bošković, Ž., 2001. On the Nature of the Syntax-Phonology Interface: Cliticization and Related Phenomena. North Holland Publications, Amsterdam.
Bullock, B.E., 2001. Double prosody and stress shift in Proto-Romance. Probus 13 (2), 173–192. http://dx.doi.org/10.1515/prbs.2001.002 (accessed 10.07.13).
Camacho Taboada, V., 2006. La arquitectura de la gramática: Los clíticos pronominales románicos y eslavos (Lingüística 27). Servicio de Publicaciones de la Universidad de Sevilla, Sevilla.
Cardinaletti, A., Repetti, L., 2008. The phonology and syntax of preverbal and postverbal subject clitics in northern Italian dialects. Linguist. Inq. 39 (4.), 523–563. http://dx.doi.org/10.1162/ling.2008.39.4.523 (accessed July 2015).
Cardinaletti, A., Repetti, L., 2009. Phrase-level and word-level syllables: resyllabification and prosodization of clitics. In: Grijzenhout, J., Kabak, B. (Eds.), Phonological Domains. Universals and Deviations (Interface Explorations 16) Mouton de Gruyter, New York, NY, pp. 79–104.
Chomsky, N., 1993. A Minimalist Program for Linguistic Theory. MIT Occasional Papers in Linguistics, pp. 1–67.
Condoravdi, C., Kiparsky, P., 2002. Clitics and clause structure. J. Greek Linguist. 2 (1), 1–39. http://dx.doi.org/10.1075/jgl.2.02con (accessed 02.03.15).
Delais-Roussarie, E., 1999. Accentuation et réalisation des clitiques en français. Cahiers de grammaire 24, 17–37.
Delais-Roussarie, E., 2000. Vers une nouvelle approche de la structure prosodique. Langue Française 126 (1), 92–112.
Demuth, K., Patrolia, M., Song, J.Y., Masapollo, M., 2012. The development of articles in children's early Spanish: prosodic interactions between lexical and grammatical form. First Lang. 32 (1–2), 17–37.
Fernández-Rubiera, F.J., 2013. Clisis revisited: root and embedded contexts in Western Iberian. In: Meklenborg Salvesen, C., Helland, H.P. (Eds.), Challenging Clitics (Linguistik Aktuell/Linguistics Today 206). Benjamins, Amsterdam, pp. 55–86.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

Fischer, S., 2002. The Catalan Clitic System: A Diachronic Perspective on Its Syntax and Phonology, (Interface Explorations 5). De Gruyter, Berlin.
Fischer, S., 2003. Rethinking the Tobler–Mussafia Law: Data from Old Catalan. Diachronica 20 (2), 259–288. http://dx.doi.org/10.1075/dia.20.2.03fis (accessed 10.07.13).
Fontana, J.M., 1993. Phrase Structure and the Syntax of Clitics in the History of Spanish (Ph.D. dissertation). University of Pennsylvania, Philadelphia, PA.
Foulet, L., 1919. Petite Syntaxe de l'ancien français, (Les Classiques français du moyen âge Série 2, Manuels 21). Champion, Paris.
Galves, C., Sandalo, F., 2012. From intonational phrase to syntactic phase: the grammaticalization of enclisis in the history of Portuguese. Lingua 122 (8.), 952–974. http://dx.doi.org/10.1016/j.lingua.2012.03.005 (accessed 10.07.13).
Gessner, E., 1893. Das spanische Personalpronomen. Z. Rom. Philol. 17, 1–54.
Ghini, M., 1993. Phi-formation in Italian: a new proposal. Toronto Working Papers in Linguistics 12, 41–78.
Golston, C., 1995. Syntax Outranks Phonology: Evidence from Ancient Greek. Phonology 12 (3.), 343–368. http://dx.doi.org/10.1017/S0952675700002554 (accessed 10.07.13).
Halpern, A., 1995. On the Placement and Morphology of Clitics (Dissertations in Linguistics) Stanford. CSLI Publications Center for the Study of Language and Information, Calif.
Hayes, B., 1989. The prosodic hierarchy in meter. In: Kiparsky, P., Youmans, G. (Eds.), Rhythm and Meter. Papers Presented at an International Conference on Metrical Theory Held at Stanford University in 1984 (Phonetics and Phonology 1) Academic Press, San Diego, CA, pp. 201–260.
Himmelmann, N.P., 2014. Asymmetries in the prosodic phrasing of function words: another look at the suffixing preference. Language 90 (4), 927–960. http://dx.doi.org/10.1353/lan.2014.0105 (accessed 05.05.15).
Hinzelin, M.-O., 2007. Die Stellung der klitischen Objektpronomina in den romanischen Sprachen: Diachrone Perspektive und Korpusstudie zum Okzitanischen sowie zum Katalanischen und Französischen (ScriptOralia 134). Narr, Tübingen.
Hualde, J.I., 2005. The Sounds of Spanish. Cambridge University Press, Cambridge.
Hualde, J.I., 2009. Unstressed words in Spanish. Lang. Sci. 31 (2–3), 199–212.
Inkelas, S., 1990. Prosodic Constituency in the Lexicon. Garland, New York.
Itô, J., 1988. Syllable Theory in Prosodic Phonology. Garland, New York.
Jacobs, H., 1994. An Optimality-Theoretic Analysis of Phonological and Syntactic Aspects of Enclisis and Proclisis in Old French. Rutgers Optimality Archive, Brazilian and European Portuguese ROA-128. http://roa.rutgers.edu/article/view/139 (accessed 10.07.13)
Klavans, J.L., 1985. The independence of syntax and phonology in cliticization. Language 61 (1), 95–120 http://www.jstor.org/stable/413422 (accessed 10.07.13)
Kuchenbrandt, I., 2009. Prosodie und historische Entwicklung: Objektklitika im Spanischen und Französischen. Südwestdeutscher Verlag für Hochschulschriften, Saarbrücken.
Lapesa, R., Menéndez Pidal, R., 2005. Historia de la lengua española, (Biblioteca románica hispánica 3, Manuales 45). Gredos, Madrid.
Legendre, G., 1996. Clitics, Verb (Non-)Movement, and Optimality in Bulgarian: Technical Report JHU!CogSci!96!5 Rutgers Optimality Archive ROA-165. http://roa.rutgers.edu/article/view/176 (accessed 10.07.13)
Lleó, C., 2002. The role of markedness in the acquisition of complex prosodic structures by German-Spanish bilinguals. Int. J. Bilingual. 6 (3.), 291–313. http://dx.doi.org/10.1177/13670069020060030501 (accessed 10.07.13).
Lleó, C., 2006. The acquisition of prosodic word structures in Spanish by monolingual and Spanish-German bilingual children. Lang. Speech 49 (2), 205–229.
Luís, A.R., 2014. On clitic attachment in Ibero-Romance. In: Amaral, P.M., Carvalho, A.M. (Eds.), Portuguese-Spanish Interfaces. Diachrony, Synchrony, and Contact (Issues in hispanic and lusophone linguistics 1) Benjamins, Amsterdam, pp. 203–236.
Martins, A.M., 1994. Clíticos na história do português (Ph.D. thesis). Universitade de Lisboa.
Martins, A.M., 2002. The loss of IP-scambling in Portuguese: clause structure, word order variation and change. In: Lightfoot, D. (Ed.), Syntactic Effects of Morphological Change. Oxford University Press, Oxford, pp. 232–248.
Mavrogiorgos, M., 2013. Enclisis at the syntax-PF interface. In: Meklenborg Salvesen, C., Helland, H.P. (Eds.), Challenging Clitics (Linguistik Aktuell/Linguistics Today 206). Benjamins, Amsterdam, pp. 27–54.
Meisenburg, T., 1996. Romanische Schriftsysteme im Vergleich: Eine diachrone Studie (ScriptOralia 82). Narr, Tübingen.
Meisenburg, T., 2000. Vom Wort zum Flexiv? Zu den französischen Pronominalklitika. Z. Fr. Spr. Lit. 110, 223–237.
Ménard, P., 1968. Syntaxe. (Manuel du français du moyen âge 3). SOBODI, Bordeaux.
Meyer-Lübke, W., 1897. Zur Stellung der tonlosen Objektspronomina. Z. Romanische Philol. 21 (3), 313–334.
Miller, P.H., Pullum, G.K., Zwicky, A.M., 1997. The principle of phonology-free syntax: four apparent counterexamples in French. J. Linguist. 33 (1), 67–90.
Monachesi, P., 1996. On the representation of Italian clitics. In: Kleinhenz, U. (Ed.), Interfaces in Phonology (Studia Grammatica 41). Akademie-Verlag, Berlin, pp. 83–101.
Mussafia, A., 1886. Una particolarità sintattica della ligua italiana dei primeri secoli. Miscellanea di filologia e linguistica. Dedicata alla memoria di Napoleone Caix e Ugo Angelo Canello. Le Monnier, Firenze, pp. 255–261.
Nespor, M., Vogel, I., 2007 [1986] Prosodic Phonology. With a New Foreword. De Gruyter, Berlin.
Patin, C., Feldhausen, I., Delais-Roussarie, E., 2013. Structure prosodique et dislocation à gauche dans les langues romanes et bantu: vers une approche typologique unifiée en OT. In: Lemaréchal, A., Koch, P., Swiggers, P. (Eds.), Actes du XXVIIe Congrès international de linguistique et de philologie romanes (Nancy, 15-20 juillet). Section 1: Linguistique générale/linguistique romane. ATILF, Nancy.
Post, B.M.B., 2000. Tonal and phrasal structures in French intonation (LOT/Netherlands Graduate School of Linguistics 34). Thesus, The Hague.
Prieto, P., 2006. Phonological phrasing in Spanish. In: Martínez-Gil, F., Colina, S. (Eds.), Optimality-Theoretic Studies in Spanish Phonology. Benjamins, Amsterdam, pp. 39–61.
Prince, A.S., Smolensky, P., 2002 [1993] Optimality Theory: Constraint Interaction in Generative Grammar. Blackwell, Malden, MA, http://roa.rutgers.edu/article/view/547 (accessed 10.07.13)
Pullum, G.K., Zwicky, A.M., 1986. Phonological resolution of syntactic feature conflict. Language 62 (4), 751–773.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002

Pullum, G.K., Zwicky, A.M., 1988. The syntax-phonology interface. In: Newmeyer, F.J. (Ed.), Linguistics. The Cambridge Survey. Cambridge University Press, Cambridge, pp. 225–280.
Ramsden, H., 1963. Weak-Pronoun Position in the Early Romance Languages (Publications of the Faculty of Arts of the University of Manchester 14). University Press, Manchester.
Revithiadou, A., 2006. Prosodic filters on syntax: an interface account of second position clitics. Lingua 116 (2), 79–111. http://dx.doi.org/10.1016/j.lingua.2004.08.017 (accessed 10.07.13).
Rinke, E., 2003. On the licensing of null subjects in Old French. In: Junghanns, U., Szucsich, L. (Eds.), Syntactic Structures and Morphological Information, vol. 7. Mouton de Gruyter, Berlin, pp. 217–247.
Rivero, M.L., 1997. On two locations for complement clitic pronouns: Serbo-Croatian, Bulgarian and Old Spanish. In: van Kemenade, A., Vincent, N. (Eds.), Parameters of Morphosyntactic Change. Cambridge University Press, Cambridge, pp. 170–206.
Rizzi, L., 1997. The Fine Structure of the Left Periphery. In: Haegeman, L. (Ed.), Elements of Grammar. Handbook in Generative Syntax (Kluwer International Handbooks of Linguistics 1) Kluwer, Dordrecht, pp. 281–337.
Sandalo, F., Galves, C., 2013. Clitic placement and grammaticalization in Portuguese. In: Meklenborg Salvesen, C., Helland, H.P. (Eds.), Challenging Clitics (Linguistik Aktuell/Linguistics Today 206). Benjamins, Amsterdam, pp. 119–134.
Selkirk, E.O., 1984. Phonology and Syntax: The Relation Between Sound and Structure (Current Studies in Linguistics Series 10). MIT Press, Cambridge, MA.
Selkirk, E.O., 1996. The prosodic structure of function words. In: Morgan, J.L., Demuth, K. (Eds.), Signal to Syntax. Bootstrapping from Speech to Grammar in Early Acquisition. Erlbaum, New York, pp. 187–213.
Siptár, P., Törkenczy, M., 2007. The Phonology of Hungarian (The Phonology of the World's Languages). Oxford University Press, Oxford.
Šurkalović, D., 2013. Modularity, Phase-Phase Faithfulness and prosodification of function words in English. Nordlyd 40 (1), 301–322. http://dx.doi.org/10.7557/12.2507 (accessed 10.12.15).
Thurneysen, R., 1892. Zur Stellung des Verbums im Altfranzösischen. Z. Rom. Philol. 16, 289–307.
Tobler, A., 1875. Jules De Coultre, de l'ordre des mots dans Crestien de Troyes. Gött. gelehrte Anzeigen 34, 1057–1082.
Wandruszka, U., 1992. Zur Suffixpräferenz. Prolegomena zu einer Theorie der morphologischen Abgeschlossenheit. Pap. Linguist. 46, 3–27.
Wanner, D., 1991. The Tobler–Mussafia Law in Old Spanish. In: Campos, H., Martínez-Gil, F. (Eds.), Current Studies in Spanish Linguistics. Georgetown University Press, Washington, DC, pp. 313–378.
Wanner, D., 1996. Second position clitics in medieval romance. In: Halpern, A., Zwicky, A.M. (Eds.), Approaching Second. Second Position Clitics and Related Phenomena (CSLI Lecture Notes 61) CSLI Publications, Stanford, CA, pp. 537–578.
Werle, A., 2009. Word, Phrase, and Clitic Prosody in Bosnian, Serbian and Croatian (Open Access Dissertations). University of Massachusetts, Amherst, http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1030&context=open_access_dissertations (accessed 21.06.10)
Zagona, K.T., 2003. The Syntax of Spanish (Cambridge Syntax Guides). Cambridge University Press, Cambridge.
Zwicky, A.M., Pullum, G.K., 1986. The principle of phonology-free syntax: introductory remarks. OSU Working Papers in Linguistics 32, 63–91.

Please cite this article in press as: Kuchenbrandt, I., Prosody and object clitic placement: A comparison of Old and Modern Spanish. Lingua (2016), http://dx.doi.org/10.1016/j.lingua.2016.05.002