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Competing constraints on the variable placement of direct object clitics in Mexico City Spanish

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We utilize variationist methodology to explore the conventionalization and pragmatics of 3rd person direct object clitic placement in Spanish periphrastic constructions. Analysis of 652 tokens extracted from three Mexico City speech corpora indicates that while proclitic position is the majority variant, the rate of enclitic position depends on particular [finite+non-finite verb] constructions, distinguished by frequency measures and more grammaticalized meanings. At the same time, enclisis is favored by propositional or non-referential direct objects and by direct objects of low topic persistence, measured by subsequent mentions. In contrast, proclitic position is favored more by inanimate than human referents, especially those that show topic persistence and whose previous mention was in the syntactic role of direct object in the same or preceding clause. These quantitative patterns suggest that proclisis indicates prototypical DOs in non-prototypical use, i.e. topical inanimates. Thus, despite conventionalization of the general proclitic schema, particular constructions and semantic-pragmatic considerations are operative factors in the variation.

Keywords: clitics, morphosyntactic variation, Mexican Spanish, pragmatics, usage-based grammar

Utilizamos el método variacionista para investigar la convencionalización y la pragmática en la colocación del clítico de objeto directo de tercera persona en construcciones perifrásticas españolas. El análisis de 652 casos obtenidos de tres corpus del habla de la Ciudad de México indica que, si bien la posición proclítica es la variante mayoritaria, la frecuencia de la posición enclítica depende de construcciones particulares de [verbo finito + verbo no finito], las cuales se distinguen en frecuencia y en el grado de gramaticalización de sus significados. Además, la enclisis se ve favorecida en objetos directos de contenido proposicional o no referenciales y en los de baja persistencia tópica (de acuerdo con la medida de menciones subsiguientes). Por el contrario, los referentes inanimados

propician la elección de la posición proclítica más que los humanos, sobre todo los inanimados con persistencia tópica y con mención previa en el rol sintáctico de objeto directo en la misma cláusula o en la inmediatamente anterior. Estos patrones cuantitativos sugieren que la proclisis señala objetos directos prototípicos en usos no prototípicos, a saber, inanimados topicales. Por lo tanto, a pesar de la convencionalización del esquema general de la posición proclítica, tanto construcciones particulares como consideraciones pragmáticas operan como factores en la variación.

Palabras clave: pronombres clíticos, variación morfosintáctica, español mexicano, pragmática, gramática basada en el uso

1. Usage-based grammar and grammatical variation

In this paper, we adopt a usage-based view of grammar in order to better understand the patterns of variability found in the syntactic placement of unstressed clitic pronouns in (Mexico City) Spanish. In the usage-based view "grammar is the cognitive organization of [speakers'] experience with language" (Bybee, 2006, p. 711), in contrast with perspectives that see grammar as a monolithic abstraction that is divorced from use, as in a Chomskyan divide between competence and performance. As we will show below, the cognitive organization of this particular corner of the grammar is sensitive to probabilistic constraints relating to the semantic properties of the direct object referent, namely (in)animacy, and to the discourse factor of topicality as well as to the particular construction-type in which the clitic pronoun occurs.

The phenomenon we are interested in is the variability in accusative, or direct object (DO), pronoun clitic placement in [finite+non-finite verb] sequences, i.e. the contrast between enclitic and proclitic position in Spanish periphrastic verbal constructions with infinitives or gerunds. In Spanish, enclitics are found in variation with proclitics only in these constructions (finite verbs take proclitics, while enclitics occur with infinitives or gerunds not in construction with a finite verb and in affirmative imperatives, where proclitics do not). On the other hand, proclitic position in these constructions corresponds to what is now well-known from the generative literature as "clitic climbing", since it is assumed that the clitic pronoun moves upward, or "climbs", in the syntactic structure from its typical postverbal placement as a direct object of the non-finite verb, to a preverbal position before the finite verb. The linguistic variable is illustrated schematically in Figure 1 below, and exemplified in (1), where both enclitic and proclitic position occur in

the same utterance with the same construction (i.e. [auxiliary poder + Infinitive]) and the same main verb (manejar):

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enclitic position [finite + non-finite verb + CLITIC]
proclitic position [CLITIC + finite + non-finite verb] (also known as "clitic climbing")
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Figure 1. Variable clitic position in infinitival and gerundial periphrastic constructions

(1) los problemas afectivos. [...] Y entonces sí, no puede manejarLOS (= enclitic), no LOS puede manejar (= proclitic); (Culta, 76)¹ 'affective problems. [...] And so yes, [the child] cannot manage THEM (= enclitic), THEM [the child] cannot manage (= proclitic)

Myhill (1988a) proposed that proclisis in [finite + non-finite verb] constructions is a measure of their grammaticalization as tense-aspect-mood expressions. That is, to the degree that the finite verb has bleached to become an auxiliary, the clitic is placed before the grammaticalizing unit of [auxiliary+main verb], just as it is for simple verb forms in modern Spanish (with the exception of affirmative imperatives).

Diachronically, placement before the [finite+non-finite verb] sequence (proclisis) was favored in Old Spanish, with increasing placement after the nonfinite verb (enclisis) beginning in the 16th century (Spaulding, 1927; see also Nieuwenhuijsen, 2006). Enclisis in [finite + non-finite verb] periphrases is reported to become the majority variant in the 16th-17th century until its progress slows down in the 18th century (Davies, 1998, p. 253). In present-day varieties, the overall trend is now toward increasing proclisis, as suggested by stylistic stratification, with higher rates of proclisis in spoken than in written corpus data (Davies, 1995).

The linguistic problem that is of utmost importance to us here concerns the role of pragmatic factors in grammatical variation and change, how such factors fit into the hierarchy of constraints that regulate clitic position in Spanish, and also how they intersect with the (seemingly ongoing) advancement of proclitic position in Spanish. In work on grammaticalization and semantic change, it is commonplace to find assertions which at the very least strongly suggest that pragmatic constraints are lost as structures become more grammaticalized. For example, in what Givón (1979, p. 208) calls "syntacticization," "'pragmatic' discourse structures develop [...] into [...] syntactic structures". In turn, Hopper & Traugott argue that while grammaticalization is often not taken to completion since it is not deterministic (Hopper & Traugott, 2003, p. 32), pragmatic constraints decay with increasing

^{1.} Examples are reproduced exactly from the published transcripts; within parentheses we give the page number for Habla Culta (Lope Blanch, 1971) and Habla Popular (Lope Blanch, 1976), and the interview number for CSCM (Martín Butragueño & Lastra, 2012).

obligatoriness. Other authors (e.g. Lehmann, 1995) talk about the loss of variability more generally and "obligatorification" in grammaticalization, which necessarily removes pragmatic factors from consideration as constraints on variation.

We would like to at least partially challenge these kinds of assumptions about the loss of pragmatic constraints, and instead reframe the issue as a research question to be investigated in empirical fashion. In particular: Once a grammatical pattern, such as proclitic placement in [finite+non-finite verb] constructions, is becoming conventionalized, are pragmatic constraints (still) operative? What are they, and how do they affect the variation? Our goal is to provide some preliminary answers to these questions in the analysis and discussion of Spanish clitic placement that follows, and demonstrate how a usage-based approach to this question can help illuminate our understanding of variable morphosyntactic phenomena such as this.

2. Method: Data and envelope of variation

We adopt the framework and methodology of variationist linguistics (e.g., Labov, 1969, 2005; Sankoff, 1988a), which seeks to discover patterns of usage in the relative frequency of co-occurrence of linguistic forms and contextual features of the (extra-) linguistic environment. To accomplish this, for our data analysis we utilize multivariate analysis, with the goal being to discover the set of factor groups which jointly account for the largest amount of variation in a statistically significant way (Paolillo, 2002; Sankoff, 1988b; Tagliamonte, 2006).

We extracted the occurrences of our variable from three widely-accessible corpora of Mexican Spanish. The Mexico City *Habla Culta* 'educated speech' (Lope Blanch, 1971), consisting of approximately 167,000 words, and *Habla Popular* 'popular speech' (Lope Blanch, 1976), 172,000 words, were part of the larger Norma Culta project spearheaded by Juan Lope Blanch in the late 1960s and 1970s, the aim of which was to provide comparable corpora of naturalistic speech from the capitals and major cities of the Spanish-speaking world. More recently, as part of the Proyecto para el Estudio Sociolingüístico del Español de España y de América (PRESEEA), the *Corpus sociolingüístico de la ciudad de México* (CSCM) has recordings made in the early 2000s, from which we draw on the 12 *nivel medio/jóvenes* interviews, which involve 20–34 year old 'middle [education] level' speakers (Martín Butragueño & Lastra, 2012).

We limit our focus to third-person DO clitics and their discourse referents. We did not study the behavior of first- or second-person clitic pronouns such as *me*, *te*, *nos*, since these are necessarily animate (and nearly always human) and an important part of our study concerns the role of (in)animacy in clitic position. The fact that these latter pronouns can be used with indirect object referents, while the

former cannot, was also an important consideration. We believe that it is necessary to analyze direct objects and indirect objects separately, given their very different associations with notions such as animacy (direct objects tend overwhelmingly to be inanimate, while indirect objects tend to be human).

We defined the variable context (or envelope of variation) for this study as the place in discourse where the speaker has a choice between clitic placement strategies in [finite+non-finite verb] constructions, i.e. between either the proclitic or enclitic variant. We extracted all third-person direct object clitics (lo, los, la, las) in contexts where enclisis/proclicis variation could occur in the three corpora analyzed. In any variationist study, it is necessary to exclude those contexts which show no variable behavior or which cannot be accounted for in the same way as the more obviously variable contexts. In this study we excluded the following environments:

(2) Exclusions

- Two-clitic clusters (N = 143, mostly Accusative-Dative (indirect object) but also Accusative-Reflexive clusters, as in (2a)-(2b), in which the rate of enclitic position is 11% (16/143). These are excluded because it is not possible to determine whether it is the properties of the accusative or the dative that influence cluster position. As stressed above, our focus in this study is limited to 3rd person accusative clitics only.
 - te LAS voy a quitar (Popular, 409) 'I [from you THEM] am going to take them away from you'
 - b. no <u>te LO</u> puedes imaginar (Culta, 175) 'you [yourself IT] cannot imagine it'
- Conjoined or juxtaposed verbs, since these show no variation between proclitic and enclitic position (N = 8, all enclitic), as in (2c):
 - tiene que ir a entregarlos <u>y a recogerLOS</u> (Popular, 441) 'she has to go leave them and pick THEM up'
- Constructions with invariable enclitic position, such as hay que+Infinitive (2d) (N = 20) (see Davies, 1995, p. 374; but also Gómez Seibane, 2013, who notes that some dialects in central Spain permit proclitic position with hay que) and ser + Adjective + Infinitive (2e) (N = 8).
 - esa filosofía habría que adaptarLA (Culta, 410) 'this philosophy would have to be adapted [IT]'
 - zy no es difícil manejarLA? (Popular, 38) 'and isn't it difficult to manage [IT]?'

The total instances of the variable at issue and the rates of the enclitic variant are shown in Table 1 below. As previous research has illustrated, the tendency in modern Spanish is towards proclitic position (Davies, 1998, p. 257), and the data from Mexico City are in clear agreement with this trend, with an overall enclisis rate of approximately just one-fourth (27%). The 2000s corpus shows a lower rate than the 1960s-1970s corpora, suggesting ongoing change (though the only statistically significant difference is that between CSCM and Habla culta). Since counts of 3rd person DO clitics are low, for the following analyses of internal, or linguistic, conditioning factors, the tokens from each corpus were combined into one comprehensive dataset (N = 652).

Table 1. Rate of 3rd person DO enclitic position with periphrastic constructions in Mexico Habla culta, Habla popular, CSCM — Nivel medio/Jóvenes

Corpus	% enclitic	N
Habla culta (Lope Blanch, 1971)	31%	70/228
Habla popular (Lope Blanch, 1976)	27%	61/230
CSCM — Nivel medio/Jóvenes (Martín Butragueño & Lastra, 2012)	20%	27/137
TOTAL	27%	174/652*

^{*} Totals include tokens from interviewer speech (N = 57).

We now turn to a discussion of the independent variables (factor groups) that potentially constrain the choice of clitic position in our data, and of how we operationalize our hypotheses for the multivariate analysis of these variables.

Operationalizing semantic-pragmatic hypotheses for quantitative analysis

3.1 Characteristics of the clitic referent: animacy-referentiality

Animacy is an exceedingly important characteristic not only for clitic placement, but also for pronominal expression more generally (Schwenter, 2006). For instance, in languages with frequent unexpressed direct objects, such as Portuguese, these tend overwhelmingly to be inanimate in nature (Schwenter, 2014), while definite/specific human referents tend to be realized overtly as either pronouns or lexical NPs. In this study, we coded all the extracted tokens for the animacy of the referent of the third-person DO clitic pronoun. We distinguished between third-person clitic pronouns with human referents (3) and inanimate referents

^{**} CSCM vs. Habla culta p < 0.03; other differences n.s. (Habla popular vs. Habla culta p = 0.3525; CSCM vs. Habla popular p = 0.1646).²

^{2.} All p values reported are from Fisher's exact test (http://graphpad.com/quickcalcs/contingency1.cfm).

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(4).³ Coded separately were cases of propositional referents (5a), where the clitic antecedent is a proposition instead of an NP referent, which have been shown to often be zero-marked in Mexican Spanish (Reig Alamillo, 2008, 2009). We also distinguished cases in which no nominal or propositional content can be attributed to the pronoun (5b), as in the fossilized pasarla bien 'to have a good time, where the third-person feminine clitic is altogether non-referential.

(3) Human referent A su hija LA fuimos a buscar a España. (Culta, 183) 'His daughter we [HER] went to visit her'

(4) Inanimate referent Porque, en realidad, ellas son las que tiran la basura. Ustedes nada más LA están recogiendo. (Popular, 296) 'Because in fact they are the ones who are leaving the trash. You [IT] are just picking it up'

- (5) Propositional or Non-referential
 - yo como hijo de familia nunca deseé venir al mundo, porque no podía desearLO. (Culta, 278) 'I as a son never had the desire to come into the world, because I couldn'tdesire IT'
 - b. ¡Pus así LA vas pasando muy bien! (Popular, 378) 'Well you [IT] are having a good time of it'

Basing our hypotheses on the findings of previous studies of Spanish clitic climbing, we predict that clitic referents higher on the animacy scale depicted in (6) will favor proclitic position, or conversely, will disfavor enclitic position (Davies, 1995, p. 377; Myhill, 1988a, pp. 357–361; Sinnott & Smith, 2007; see Aissen, 2003; Comrie, 1989). Put a bit differently, we expect greater proclitic position to obtain at the left end of the animacy scale, and greater enclitic position at the right end of the animacy scale.

(6) Animacy scale for 3rd person accusative clitics human > inanimate > propositional > no content

^{3.} In the Animacy factor group, third person forms with second person referents (as in *A usted* LA andábamos buscando, Popular, 109) are not counted with the other third person clitic pronouns with human referents; the tendency seems to be for a higher rate of proclisis with second person, 91% (2/22), than with third person human referents, 71% (161/226), which would be consistent with the "animacy hierarchy" for clitic climbing (Myhill, 1988b, p. 242). Also excluded were the few (N = 5) cases of animal referents.

3.2 Pragmatic-discourse factors: anaphoric and cataphoric mention

The role of topicality in the realization of DOs generally has been a popular issue in recent research (e.g. Aissen, 2003; Dalrymple & Nikolaeva, 2011), but determining what is a "topic" or whether something is "topical" are issues that are fraught with circularity and hard-to-operationalize intuitive notions. In a classic work on topicality and discourse anaphora, Givón (1983) operationalizes topicality using both backward- and forward-looking measures that take into account both the distance from previous mentions of the same discourse referent, known as referential distance, as well as the frequency of subsequent mentions, or topic persistence. More recent studies have refined these measures considerably and devised ways of integrating distance with persistence (e.g. Shain & Tonhauser, 2011; see Myhill, 2005).

As anaphoric measures of the previous mention of the clitic referent we coded for both syntactic function and distance. We distinguished between cases of previous mention as subject of the immediately preceding clause (7a) and previous mention as DO of either the same (7b) or the immediately preceding clause (7c). Given an association between subject and topic (e.g., Givón, 1979, pp. 209, 298), we can consider more 'topical' to be instances whose previous mention was as subject of the preceding clause. Grouped together were remaining cases without a previous mention within one clause. These instances can be considered to be less 'accessible', or "more disruptive, surprising, discontinuous, or hard to process" topics (Givón, 1983, p. 18).

- (7) a. Previous mention: subject immediately preceding clause

 <u>el nopal</u> orita `stá barato. LO `**stan comprando** a seis. (Popular, 361)

 'the prickly pear is cheap now. They [IT] **are buying** it at six'
 - b. Previous mention: DO same clause
 Esa emoción LA vine a sentir a los seis meses (Popular, 110)
 'That feeling I [IT] came to feel it after six months'
 - c. Previous mention: DO immediately preceding clause nos traía <u>ropa</u> usada ya, pero vieja, bien horrorosa, y que LA queria vender. (Popular, 335)
 'he would bring used <u>clothing</u>, really old, horrible, and that he [IT] wanted to sell it'

In addition, in order to have a *cataphoric* measure of topicality, we took into account the topic persistence of the DO referent. While topic persistence has been counted in terms of the total number of mentions of the same referent in the following ten clauses, measured from a given token (see Myhill, 2005, p. 473), we found that for our dataset the significant distinction to be drawn was between cases in which the clitic referent was mentioned more than once in the following ten clauses and cases in which it was not mentioned at all or only once.

The coding is illustrated in (8), where each clause is on a separate line (not counting quotative *decir* or discourse formulas ¿sabe qué? 'you know what', *cré* 'do you think' in this example).⁴ The target instance of the variable, *la*, appears in line c. For anaphoric mention, or referential distance, it was coded as having its previous mention in the same clause (as the full NP *esa sandía*). For cataphoric mention, or topic persistence, it was coded as 'persistent', since the referent is mentioned more than once (three times) in the following 10 clauses (here the following seven clauses are shown), in lines g, h, and j.⁵

- (8) Persistent DO (mentioned more than once in following 10 clauses)
 - a. Dije: "Me voy a llevar una sandía grande para mi marchanta".
 - b. Le digo a ese cuate: "Pésame completo mano,
 - c. porque esa sandía nomás LA voy a entregar.
 - d. No... Si no me pesas completo,
 - e. mañana te vengo a avisar".
 - f. "No, no; que sí. Que sí está bien completo".
 - g. ¿Sabe qué? -"¿Cuántos pesa?".
 - h. -"Pesa ocho kilos completos".
 - i. Que vengo llegando aquí.
 - j ;Cuánto cré que pesaba <u>la ingrata sandía</u>?

(Popular, 359)

- a. 'I said: "I'm going to take a big watermelon for my customer."
- b. I say to this guy: "Give me the exact weight,
- c. because this <u>watermelon</u> I [IT] **am going to take** it to somebody else.

$[\ldots]$

- g. "How much does <u>it</u> weigh?"
- h. "It weighs eight exact kilos".
- I come back here.
- j. How much do you think that darn <u>watermelon</u> weighed?

^{4.} Not counted as clauses were fixed impersonal expressions such as *es que* 'it's that' or discourse markers such as *;sabes qué*? 'you know what?' .

^{5.} Most propositional or non-referential instances (as in (7a) and (7b)) were coded as "Not persistent". An example of a "Persistent" non-referential is: La otra, es la corrupción administrativa. En realidad, en los fuertes movimientos sociales, mientras más duran, más sucede... El que no ha tenido, trata de tenerLO; y el que ha tenido, trata de conservarLO. Entonces, el que no ha tenido, a como dé lugar, trata de tenerLO. Y no, no se conforman con tener dentro de dos, tres años, o cinco, sino ya quieren tenerLO mañana (Culta, 398). With respect to our anaphoric measure, approximately three quarters (83/113) of propositional or non-referential instances were coded as having no previous mention within a clause.

If clitic position is sensitive to discourse-pragmatic considerations of topicality and information flow, we should find effects for our cataphoric (topic persistence) and anaphoric (previous mention) measures, with the prediction that greater proclitic positon should obtain with more topical and more accessible clitic referents and greater enclitic position with less topical and less accessible referents.

Finally, we distinguished between less frequent particular [finite + non-finite] verb constructions — those with fewer than 30 tokens — and more frequent ones, of which there were seven, each of which had at least 50 tokens: future and motion ir a, poder, querer, tener que + Infinitive; estar + Gerund. Other factor groups tested were DO gender and number.6

Quantitative patterns and usage-based constructions

The factor groups were considered together in multivariate analysis using logistic regression here, variable-rule analysis) with GoldVarb Lion (Sankoff, Tagliamonte, & Smith, 2012). The results of this analysis appear below in Table 2 and should be interpreted as follows: The 'input' indicates the overall probability that the application variant, in this case enclisis, will occur when no factors are considered. The numbers in the first column represent the Probability (or Factor Weight) that each factor contributes to the occurrence of the application variant: the closer to 1, the more likely enclisis; conversely, the closer to 0, the more likely is proclisis. The second column shows the percentages of occurrence (rate) of the enclitic variant by each factor, and the third column shows the total number of tokens corresponding to each factor (i.e. to each context or contextual feature).

As the results in Table 2 show, Construction contributes a significant effect, which we discuss first before turning to the semantic-pragmatic constraints of Animacy and Topic persistence, the other two factor groups that were selected as significant.

^{6.} Other factors may be polarity (negation favoring proclitic position with querer, deber or poder) (Myhill, 1988b, p. 249); relative animacy (with proclisis favored when the subject is lower on the animacy scale than the direct object) (Myhill, 1988b, pp. 241-244); prosody (Spaulding, 1927, p. 348). As for specificity, DO clitics referring to people or things that are not considered to be interchangeable (e.g., the 'watermelon' in (8b)) vs. those referring to an exemplar, or any member, of a class of referents (the 'watermelon' in (8a)), we failed to find an effect in earlier analyses. We did find a priming effect, such that the presence of a coreferential enclitic within the preceding three clauses favored enclisis of the target token; the corresponding effect for a proclitic prime and target is weaker (Schwenter & Torres Cacoullos, 2014).

Table 2. Factors contributing to speakers' choice of enclitic position for Direct Object 3rd person pronoun clitics in [finite + non-finite verb] constructions*

N=652, Input Probability=.26 (Average rate of enclisis: 27%)				
	Prob.	%	N**	
Construction				
Less frequent	.64	39%	189	
More frequent (ir a, poder, querer, tener que + Inf; estar + Ger)	.44	22%	463	
DO Animacy-referentiality				
Propositional or non-referential	.61	39%	115	
Human	.55	29%	226	
Inanimate	.42	21%	271	
DO Topic persistence (cataphoric)				
Not Persistent	.54	30%	341	
Persistent (2+ mentions in 10 clauses)	.45	23%	286	

^{*} Not selected as significant: DO Previous mention (previous mention as DO tends to disfavor enclisis); Gender (masculine vs. feminine) and Number (singular vs. plural) (neither with a discernable direction of

4.1 Constructions in variable placement of DO clitics

Many scholars have previously noted that choices in clitic placement depend on particular constructions and, specifically, on the meaning of the finite verb in these constructions. The more grammaticalized the construction is as a tense-aspectmood expression, the more likely clitic climbing will be (Myhill, 1988a, 1988b). Conversely, the more lexical the meaning contributed by the finite verb in the construction in question, the less likely clitic climbing will be. Throughout the history of Spanish, proclisis to the finite verb has been favored the more auxiliary-like the finite verb is (Davies, 1998, pp. 258-9; Figure 3).

Since grammaticalization as an overarching concept represents a confluence of different morphosyntactic, phonological, semantic, and discourse-pragmatic processes (Hopper & Traugott, 2003), it is difficult to argue solely on the basis of meaning for greater or lesser degrees of grammaticalization. But on the widelyheld hypothesis that greater grammaticalization is paralleled by greater frequency (Bybee, 2010, among many others), it is actually possible to independently test the claim that greater grammaticalization aligns with greater proclitic use.

We see in Table 2 that enclitic position is favored by less frequent constructions, including andar, ir + gerund and deber (de), haber de, saber, tratar de, venir

^{**} Ns do not add up to Total due to exclusions: for Animacy, 2sg (N=22) and animal referents (N=5) (see n. 3), as well as uncodable cases (N=13); for Topic persistence, cases where the transcript ends before 10 following clauses are completed (N=11) and other uncodable cases (e.g., where the interlocutor intervenes before 10 clauses are completed) (N=14).

a, volver a + Infinitive). Conversely, proclisis is more likely with more frequent constructions, namely ir a + Infinitive (with future and motion meaning), poder, querer, tener que + Infinitive, and estar + Gerund.

The explanation for this aggregate frequency effect is that proclisis is tied to *chunking* of the finite and non-finite verb. In a usage-based view, a consequence of frequent repetition is the chunking of contiguous linguistic units and increasing fusion of the sequence of (erstwhile) units (Bybee, 2010, pp. 44–45). For example, for the grammaticalizing Progressive [*estar* 'be (located)' + Gerund] construction, proclitic position has increased over time as part of a series of changes toward 'unithood' (Torres Cacoullos, 1999). Unithood ensues as the construction evolves from a sequence of two independent constituent parts — *estar* with a gerund (*-ndo*) complement, having a meaning of 'to be located doing X' — to a periphrastic unit in which the gerund is the main verb and *estar* contributes aspectual more than spatial meaning.

Nevertheless, there is no one-to-one correspondence between rates of enclisis and particular construction frequency. In Table 3 below we present the [finite + non-finite verb] constructions that occur in the three Mexico City corpora from which we extracted the data for this study, ordered by their frequency in the comprehensive dataset. We see here that the most frequent, future $[ir \ a + Infinitive]$ (N = 120), does show the lowest rate of enclisis (7%), however the second most frequent, [poder + Infinitive] (N = 105), shows more than triple that rate (26%). While with our small dataset generalizations about constructional differences must be tentative, it would seem that a division of the list in Table 3 based on the form of the non-finite verb (infinitive vs. gerund constructions) does not yield coherent groupings: infinitive constructions are found at both extremes of the rates of enclisis, at below 10% for future ir, volver a and haber de but above 25% for eight others. Nor is a division based on the verbal category expressed by the construction (aspectual vs. modal constructions) satisfactory: aspectual expressions are found with a variety of rates of enclisis, from a low of 0% for [ir+Gerund] to a high of 22% for [andar+Gerund] (though our Ns are low); modal expressions, too, present a range of rates of enclisis.

This brings us back to Myhill's (1988a) hypothesis that clitic climbing, or proclisis, corresponds to degree of grammaticalization. To illustrate, consider the case

^{7.} Other constructions counted (listed alphabetically; + Infinitive unless noted): acaber de, alcanzar a, comenzar a, dejar (de), esperar, estar por, haber de, iba a (conditional), llegar a, mandar (causative), necesitar, oir, pensar, procurar, tardar en, seguir + Gerund, venir + Gerund, vamos a (hortative 'let's'), volver a. In cases of two auxiliary(-like) verbs (N = 30), we code the second one; for example, we code ya no voy a poder hacerlo, Popular 74, as a [poder + Infinitive] construction (unless there is proclisis to the first verb, for example, lo vamos a mandar decir, Culta 94, which was coded as [ir a + Infinitive]).

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Construction	% enclitic	N	
<i>ir a</i> + Infinitive (future)	7%	120	
poder + Infinitive	26%	105	
estar + Gerund	13%	62	
tener que + Infinitive	30%	61	
<i>querer</i> + Infinitive	37%	59	
<i>ir a</i> + Infinitive (motion)	32%	56	
<i>ir</i> +Gerund	0%	28	
<i>volver a</i> + Infinitive	6%	18	
saber + Infinitive	39%	18	
<i>tratar de</i> + Infinitive	83%	18	
<i>deber (de)</i> + Infinitive	29%	14	
<i>venir a</i> + Infinitive	46%	13	
andar + Gerund	22%	9	
haber de + Infinitive	0%	9	
Other	52%	62	
TOTAL	27%	652	

Table 3. Rate of enclitic position for Direct Object 3rd person pronoun clitics in [finite + non-finite verb] constructions (in descending order of frequency in the data)

of the two $[ir\ a + Infinitive]$ 'to be going to' constructions. The results indicate that there is a higher rate of enclitic position in motion-sense uses of $[ir\ a + Infinitive]$ (9a) (32%) than in the more grammaticalized future tense uses of [ir a + Infinitive] (9b) (7%). This differentiation of the two otherwise structurally identical constructions supports Myhill's (1988a) insight that proclitic position in particular [finite+non-finite verb] sequences indicates greater grammaticalization of the construction. Nevertheless, the prevalence of proclitic position even with motionsense tokens of [ir a + Infinitive], which retains lexical meaning when compared to the analytic future construction, is evidence that the preference for proclitic position generally affects [finite + non-finite verb] expressions to some degree.

- (9) a. *ir a* + Infinitive (motion) va a leñar/ baja su carga de leña/ y LO va a vender/ y ya tiene para < ~pa > comer (CSCM, Interview 43) 'one goes to chop wood, brings down their load of firewood and [IT] goes to sell it and so has [with which] to eat'
 - b. ir a + Infinitive (future)a veces digo/ "este no LO voy a vender"/ y sí termino vendiéndolo (CSCM, Interview 38) 'sometimes I say "this one I [IT] will not sell it", but yet I end up selling it'

As another illustration of the point that more grammaticalized constructions demonstrate more proclitic position, we would surmise that of the more frequent expressions of modality, [poder+Infinitive] shows a lower enclisis rate than [querer + Infinitive] because poder is more grammaticalized than querer in modal constructions. The argument would be that in addition to the more lexical meaning of "ability of an agent" (10a), the poder construction may have a more grammatical "root possibility" meaning (10b) (see Bybee, 2003, p.606 on the evolution of English can).

- (10) a. que se llegue a la verdad hasta donde el hombre puede alcanzarLA ¿no? (Popular, 344) 'that one reach the truth to the extent that man can [is able to] attain IT, right?
 - b. no había buenos deportistas en México. Pues simplemente no LOS puede haber. (Culta, 225) 'there weren't any good athletes in Mexico. Simply [THEM] there cannot be'

A complementary account of differences between particular constructions in rates of enclisis looks to a relative frequency measure. In accordance with usage-based theory, we expect variation patterns to be affected by cumulative, storage-based factors that reflect speakers' overall prior experience with a form, such as frequency of occurrence in a particular context (e.g., Brown & Rivas, 2012). A usage-based difference between [poder+Infinitive] and [querer+Infinitive] is not only the greater token frequency of the former indicated by Table 3, but the greater frequency of this infinitival construction relative to other contexts of use of poder. In a sample of all the forms of poder and querer found on pp. 13-127 of the Habla Popular corpus (Lope Blanch, 1976), nearly all (94%, 108/115) poder tokens occur in the [+Infinitive] construction, while fewer than half (42%, 61/144) of querer tokens do.

Why is the relative frequency of the [finite + non-finite verb] construction with respect to other constructions of the finite verb relevant? We know that verbs in frequent lexically-particular constructions may maintain associations with other instances of the same verb outside the particular construction, for example, English auxiliary go in the future construction may maintain association with lexical verb go in various motion constructions. The evidence for such associations is priming (Szmrecsanyi, 2005, p. 139; Torres Cacoullos, in press). We may hypothesize, then, that querer in [querer + Infinitive] is associated with other instances of querer, including full lexical uses with an NP complement (e.g., Resortes la quería 'Resortes loved her', Popular, 27), which constitute approximately one-fourth

(35/144) of all tokens.⁸ These associations external to the construction would detract from the internal association between querer and the Infinitive, and thus detract from the unithood of the construction.

Thus, contributing to differences among [finite+non-finite verb] constructions in the positioning of clitics, in addition to more grammaticalized meanings, is token frequency and relative frequency of the finite verb with respect to the other constructions in which it occurs.

Based on the overall preference (73%) for 3rd person DO proclitics over enclitics we may posit a general schema of the form [CLITIC + finite verb + non-finite verb] wherein the clitic is becoming conventionalized in proclitic position. The example in (11) illustrates the occurrence of a clitic in proclitic position with a less frequent sequence that can be viewed more as a combination of two lexical items than as a grammaticalized unit consisting of an auxiliary plus main verb. The construction [alcanzar a 'reach to/manage' + Infinitive] would likely not be included in a list of auxiliary-headed verbal constructions in Spanish, but can still be used in pseudo-auxiliary fashion:

- (11) "...mañana llevas a tu mamá al doctor". Le dejé dinero. ¡No, pus ya no! ya no LA alcanzó a llevar. (Popular, 373)
 - "tomorrow you take your mother to the doctor". I left her money. Well, no, she didn't [HER] manage to take her in time'

The preference for proclitic placement appears to be diffusing construction-byconstruction (see Tottie, 1991). Thus, a hypothesis for diachronic study is that the pattern begins with more grammaticalized or grammaticalizing constructions and then extends to other [finite+non-finite verb] sequences that are relatively less grammaticalized. Nevertheless, such lexical diffusion of proclitic position would not be wholly at the expense of other, semantic-pragmatic, constraints that come into play to determine clitic placement, as we discuss immediately below.

Topicality in interaction with animacy

We turn now to the semantic and discourse-pragmatic factors under analysis. In Table 2, in addition to construction-type, the animacy-referentiality and topic persistence of the DO clitic referent were significant in the multivariate analysis.

^{8.} Other querer constructions in this sample: with a complement finite clause (¿Quién quieres que se ocupe de mí?, 22/144), without a complement (No quería, porque decía que no, 12/144), lo que + querer (9/144).

5.1 Topicality effect on DO clitic position: persistence of DOs

Viewing the probabilities for the topic persistence (cataphoricity) of the DO referent from a complementary perspective, we find that enclisis is disfavored, and proclisis is favored, by persistent DOs - those whose referent was mentioned more than once within the following ten clauses — as predicted. This supports the proposal that proclitic placement "can serve to [...] get the most topical NP into the main clause" (Myhill, 1988b, p. 242)

We cross-tabulate cataphoricity and anaphoricity (which was not selected when considered together with the other factor groups in the multivariate analysis), in Table 4 below. We look here at both contextual distributions and rates of enclisis. First, we see that in cases of previous mention as DO, more instances are Not Persistent (116 vs. 88 tokens), whereas in cases of previous mention as subject, more instances are Persistent (105 vs. 84 tokens). 9 This distribution indicates the greater topicality of subjects than DOs, which is expected (e.g. Comrie, 1989; Givón, 1979, pp. 209, 298). Second, we find that the lowest rate of enclisis (15%) actually occurs with persistent DOs that were previously mentioned as a DO in the same clause (7b) or preceding clause (7c), while the highest enclitic rate (39%) is found with non-persistent DOs that were previously mentioned as subjects in the preceding clause. (In remaining cases, i.e. those with at least one intervening clause from the previous mention, persistence as measured here makes no difference in rate of enclisis, as seen in the bottom row.)

That is, we have the lowest rates of enclisis — or the highest rate of proclisis when a 3rd person DO clitic that was previously mentioned as DO in the same or preceding clause is subsequently mentioned more than once in the following ten clauses. We could say, then, that proclitic position is highest with persistent DOs whose previous mention would not have favored persistence, that is, referents recently mentioned specifically as DOs rather than as subjects. 10

^{9.} In Table 4, counted together with previous mentions as preceding-clause subject are the fewer cases of preceding-clause indirect object clause, oblique or unattached noun.

^{10.} The rate of proclitic position with a previous mention as DO is higher when it is in the same clause (85%, 52/61) than in the preceding clause (76%, 115/152); the proclisis rate also appears to be higher for persistent cases (with previous mention as DO in the same clause (preverbal DOs) in the same clause at 95%, 18/19 vs. 83%, 57/69 in the preceding clause.) Instances with a previous mention as DO have been viewed as topical (see Silva-Corvalán, 1984).

Persistent Not Persistent Previous mention as DO in same or preceding clause 15% (13/88) 24% (28/116) Previous mention as subject of preceding clause 22% (23/105) 39% (33/84) No previous mention within one clause 32% (23/73) 28% (36/128)

Table 4. Rate of enclisis by topic persistence (cataphoricity) and syntactic function-distance of previous mention (anaphoricty) of DO clitic referent

5.2 Inanimacy effect

Under the DO Animacy-referentiality factor group in Table 2, enclisis is most favored for propositional or non-referential DO clitics, as in (5). This result is as predicted, since these are the lowest on the 'animacy scale' depicted above in (6). However, 3rd person inanimate referents, which are lower on the animacy hierarchy, disfavor enclisis (and therefore favor proclisis) more than 3rd person human referents (as Gudmestad (2006, Tables 3, 4) reports for ir). It turns out that this unpredicted animacy effect is closely related to the topicality effects we have just identified.

Table 5 depicts a cross-tabulation of topic persistence (cataphoricity) and animacy, showing the rate of enclisis for 'persistent' vs. 'not persistent' DOs, separately for DOs with inanimate and human referents and for propositional or nonreferential DO clitics. We are interested again in both contextual distributions and rates of enclisis.

Table 5. Rate of enclisis by topic persistence (cataphoricity) and animacy of DO clitic referent

	Persistent	Not persistent
Inanimate	14% (13/96)	25% (42/167)
Human	26% (40/153)	36% (23/64)
Propositional or non-referential*	38% (4	41/109)

^{*} Topic persistence does not apply to Propositional or non-referential DO clitics, with few tokens coded as Persistent (see Note 5). Note: The difference between persistent and non-persistent referents is statistically significant for inanimates (p = .0279) but not for human referents (p = .1892) (Fisher's exact test).

On the one hand, from Table 5 we can gather that a difference between human and inanimate DO referents is one of distributions across contexts of occurrence. Human DO referents are more likely to be topically persistent (153 vs. 64 tokens), whereas inanimate referents are more likely to be not persistent (167 vs. 96 tokens). This is depicted in Figure 2 and is as expected from previous findings in the literature (Givón, 1983; Myhill, 1992).

On the other hand, we observe the same tendency for both inanimate and human referents as far as clitic placement is concerned. 'Persistent' inanimates had lower enclisis rates (14%) than 'not persistent' inanimates (25%), as did 'persistent'

humans (26%) than 'not persistent' ones (36%). This is depicted in Figure 3, in the sloping lines for both inanimates and humans. However, it seems that persistence may be a more important consideration for inanimate than for human referents: the rate of enclisis for 'persistent' compared with 'not persistent' DO clitic referents is 1.8 times greater for inanimates but 1.4 greater for humans (seen in the slightly greater slope of the line for inanimates in Figure 3). In other words, it appears that the association between topic persistence (cataphoricity) and clitic position may be more applicable to marking the topicality of inanimate than human DO referents.¹¹

In summary, 3rd person DO clitic placement is sensitive to the semanticpragmatic factors of animacy and topic persistence. Enclisis is favored with

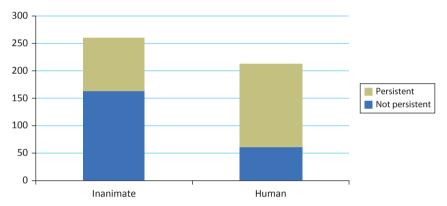


Figure 2. Distribution of 3rd person DO clitics according to topic persistence (cataphoricity): inanimate and human referents

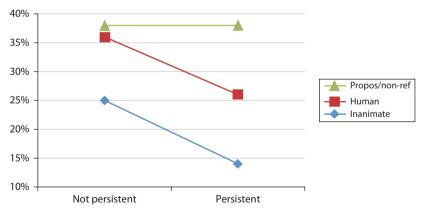


Figure 3. Rate of enclisis by topic persistence (cataphoricity): inanimate and human referents

11. A diachronic study would reveal directionality of change, including whether the association between topicality and 3rd person DO clitic placement began with inanimates or human referents.

propositional or non-referential DO clitics while proclisis is favored with persistent referents (those with more than one subsequent mention) (Table 2), especially inanimate referents (Table 5) and referents previously mentioned in the syntactic function of DO of the same or the immediately preceding clause (Table 4). When we look more closely at these previous mentions as DO, not surprisingly we find a skewing by animacy, such that inanimate referents have a predilection for previous mentions as DO rather than as subject of the preceding clause, in contrast with human referents, which are more likely to be previously mentioned as subjects than DOs. ¹² It appears, then, that rates of proclitic position for 3rd person DOs are higher with persistent DOs with an inanimate referent and previous mention as a DO. In other words, we may say that proclisis is higher with non-prototypical topics.

5. Conclusions

As many prior studies have noted, inanimates are more prototypical DOs (Comrie, 1989; Næss, 2007), as opposed to subjects and indirect objects, whose referents tend overwhelmingly to be not only animate, but human. Therefore, the results of this study suggest that, first, ongoing shift toward proclisis affects the central members of the class of DOs, i.e. inanimates, before 3rd person DO clitics with human referents. Second, clitic placement reflects topicality considerations in discourse, as operationalized by topic persistence — for both human and inanimate referents — and as also seen in the favoring of enclitic position with propositional or non-referential DO clitics. Indeed, the lowest rate of enclisis — and highest rate of proclisis — is found with DOs that are both 'persistent' (cataphoric) and that have been recently (in the same or preceding clause) mentioned as DOs (anaphoric).

In the aggregate, DOs with human referents are more persistent than inanimates, as expected, and proclisis is favored with persistent referents, as also predicted. Nevertheless, proclitic position is favored more by inanimate 3rd person DOs than by human 3rd person DOs. Thus, we hypothesize that 3rd person DO 'clitic climbing' has advanced with inanimate DOs that are 'topical'. Inanimates are precisely prototypical DOs, but not prototypical 'topics'. In other words, we suggest that 'clitic climbing' can signal prototypical DO referents in non-prototypical use, i.e. topical inanimates.

^{12.} For inanimate referents, previous mention as DO in the same or preceding clause showed an enclitic rate of 19% (24/128), compared with 30% (22/74) when previously mentioned as subject of the preceding clause and 15% (8/55) when the previous mention was at a distance of at least one intervening clause. For human referents, the corresponding figures are 25% (13/53), 28% (27/97), and 30% (18/61).

The findings highlight the importance of animacy and how considerations of topicality (cataphoricity) and information flow or accessibility (anaphoricity) are modulated by animacy. The sensitivity of 3rd person DO clitic position in [finite+non-finite verb] constructions to topicality and information flow also bears on crucial issues relating to theories of discourse anaphora, and especially to the form-function correlations of anaphoric elements. Accessibility-type theories (e.g. Ariel, 1990, 2008) account for the general tendency for referring expressions to have more phonetic content the lesser the accessibility of their referents. However, in focusing on differences between distinct forms of anaphoric referring expressions, such as null elements vs. pronouns vs. lexical NPs, these theories have made no provisions for dealing with the occurrence of the same form in different **positions** in the clause, such as the Spanish clitic pronouns in proclitic vs. enclitic position.

To come back to the research questions posed at the outset, discourse-pragmatic constraints on clitic placement in the present data remain operative. We have shown that, despite the growing conventionalization of the general proclitic [CLITIC+finite+non-finite verb] schema, clitic position in Mexico City Spanish is (still) motivated by pragmatic considerations of topicality and information flow. Persisting enclitic position encodes these discourse-pragmatic considerations into grammatical structure, allowing speakers' choices to subtly indicate the status of the referents they deploy in discourse.

At the same time, when we analyze separately the two particular constructions with the highest rate of proclisis, future [$ir\ a+$ Infinitive] and progressive [estar+Gerund], we find that in neither is clitic position susceptible to topic persistence (the rate of enclisis for persistent vs. not persistent referents is 5%, 3/58 vs. 7%, 4/59 for $ir\ a$ and 15%, 4/27 vs. 13%, 4/30 for estar; neither difference is significant). Thus, discourse-pragmatic constraints recede as enclisis recedes.

More generally, we have confirmed that constructional constraints are strong, suggesting gradual, construction by construction, spread of proclitic position, which is clearly the majority variant (occurring approximately three quarters of the time). Differences between particular constructions are tied to token and relative frequency as measures of unithood (e.g., infinitive constructions with *poder* vs. *querer*) and to grammaticalization as tense-aspect-mood expressions (e.g. the future vs. the motion [$ir\ a$ + Infinitive] construction).

We conclude that the grammar of variable DO clitic placement in Spanish is shaped by particular constructions as well as by general pragmatic considerations, in this case most strongly anchored by the (in)animacy and topicality of the direct object clitic referent.

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