

Differential Object Marking: Quantitative Evidence for Underlying Hierarchical Constraints across Spanish Dialects

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1. Introduction

Differential Object Marking (DOM; see Aissen 2003; Bossong 1991; Comrie 1979, 1989) is a cross-linguistic phenomenon where languages variably overtly mark objects based upon particular semantic and pragmatic features of the object. While DOM has been primarily a qualitative undertaking in prior research, the purpose of this paper is to pursue a variationist investigation of DOM. Of particular interest is the well-known case of DOM that occurs in Spanish, (a.k.a. “personal *a*”, prepositional accusative, accusative *a*). Spanish employs *a* to mark human accusative (direct) objects. This transparent example of DOM relates to the animacy status of the accusative object.

- (1) fuimos a buscar *(a) Keyserling (HCM, 280)
‘we went to look for
- (2) empezábamos a buscar Ø palabras (HCBA, 174)
‘we started to look for words’

Prescriptively, when the accusative object is human (1) it is marked with the preposition *a* and no marking occurs when the object is inanimate in (2). Where the object is non-human, marking would be ungrammatical. Unfortunately, this prescribed use of DOM is insufficient to account for DOM in actual use. Indeed there are many cases where this “personal” generalization fails to account for actual usage. It is not unusual to find human accusatives unmarked as well non-human accusatives marked irrespective of animacy in spoken and written Spanish. Additional “exceptional marking” may occur as a result of ambiguities that arise from the relative flexibility of subject and object position and verbs with the *personal a* also serves a disambiguating function.

As a result of the inherent variability in *a*-marking there are varied claims regarding the motivating factors of DOM in Spanish. The most common factors associated with DOM are semantic/pragmatic and grammatical features associated with the NP, namely animacy, specificity and definiteness. Specificity relates to whether the referred entity is specific, unique and known to the speaker or not. It should be noted however that not all discussion of DOM accepts specificity as a motivating factor (cf. Leonetti 2004). Definiteness, as assumed in the majority of research on DOM, is a property of the NP based on its form and incorporating the additional feature of specificity (Aissen (2003), Company Company (2002), Torrego (1999), García García (2005), Kliffer (1995), Laca (2003, 2006)). In addition to these three “principal” factors, Kliffer (1995) suggests that number and mass/count distinctions also contribute, although animacy may be the ultimate determinant in a given context.

While the semantic features of animacy, specificity and definiteness are most transparently correlated to the (un)marked object, other researchers have attempted to account for the variation of DOM with various discourse and pragmatic functions. These pragmatic and discourse-based explanations of DOM have been attributed to “discourse prominence,” “individuation” and “exceptionality” (Weissenrieder 1985, 1990, 1991; Kliffer 1984) “topicality” (Leonetti 2004) and “discursive prominence” (Dumitrescu 1997) among others. While the terminology is rather exciting,

the reality is that despite these varied attempts, there is little that has been done to quantify these terms and the analyses generally rely on contrived, qualitative data.

While these approaches have appealed to animacy, specificity and definiteness to differing degrees as part of a discourse-pragmatic account of DOM, Laca (2006) presents perhaps the most concise explanation by discussing the combination of *local* and *global factors* (*factores locales y factores globales*). She claims the local factors (i.e. the semantic features of the NP) animacy and definiteness privilege DOM but that global factors (discourse and pragmatic factors) may also constrain *a*-marking. In this way Laca succeeds in circumscribing the relevant factors of DOM that have been argued in the previous literature while accounting for why there is variation in actual usage.

The principal shortcoming of the research in DOM to this point has been the dearth of quantitative analyses, especially considering the underlying hypothesis that multiple factors are necessarily involved to account for all of the variation manifest in DOM. The multiplicity of potential factors affecting DOM in Spanish presents an ideal situation for variationist techniques precisely because variationist theory and methodology assumes that multiple factors are relevant in constraining linguistic phenomena. The purpose of this paper is to approach *a*-marking from this perspective by quantifying these various potential factors. Being an inherently binary variable i.e., accusative objects are either marked or unmarked, DOM is ideally suited for Varbrul analysis using GoldVarbX (Sankoff, Tagliamonte, & Smith 2005). In fact Kliffer (1995: 95) actually suggests that to account for the multiplicity of factors one may need to rely on Sankoff's variable rules approach to language, the precursor to the Varbrul program. The purpose of this undertaking is to quantify the potential motivating factors of DOM in Spanish, comparing three dialects of Spanish.

1.1. Research Questions

With the theoretical perspective and appropriate tools necessary to approach the DOM phenomenon in place, the following questions direct the current research:

- Following Laca's organization of relevant factors, what are the local and global factors that are relevant (and irrelevant) to DOM?
- How can the relationship between local and global factors be characterized?
- How can animacy be more discretely defined to account for DOM? Specifically, is relative animacy between the subject (S) and direct object (DO) a relevant factor in DOM, independent of the animacy of the DO?
- Does the linguistic form of the DO (i.e. NP type) affect the DOM?
- What is the role of specificity in *a*-marking? Does it have an independent effect on the variation?
- Are there measurable differences in the function and distribution of DOM in Spanish dialects? If this is the case, how similar or different are the underlying grammars of DOM in these Spanish dialects?

2. Methodology

As stated previously, this analysis of DOM maintains an important distinction from previous investigations by virtue of only using *spoken* data as opposed to depending upon written, constructed, "curio" and anecdotal sources. The data were culled from the transcribed oral interviews of three corpora from the *Habla Culta* project: *Habla Culta de Buenos Aires* (HCBA 1987) the *Habla Culta de Madrid* (HCM 1981) and *Habla culta de la ciudad de Mexico* (HCCDM 1980). There is additional motivation for the selection of these dialects. First, multiple corpora were selected to provide data to compare and contrast dialects that represent distinct metropolitan varieties of Spanish. Second, the corpora were selected to function as a quantitative test of the qualitative comparison of Madrid and Buenos Aires dialects by Dumitrescu (1997) and more generally as a response to the claims that certain dialects, especially Buenos Aires (Barrenechea and Orecchia 1977), exhibit a much broader use of DOM, frequently marking many transitive, inanimate objects.

As stated above, there is a lack of quantitative descriptions of DOM in Spanish. I believe this reflects the notoriously arduous task of finding sufficient syntactic tokens reflecting the variation, and

in the case of DOM, quantifying the unmarked cases. To overcome the challenges that a syntactic variable presents, and to be able to account for both the marked and unmarked cases, I have employed a methodology that provides ample syntactic tokens for comparison. The envelope of variation was determined inductively for searching the corpora. First, overtly *a*-marked direct objects were extracted from the corpora. These tokens were arguments of (necessarily transitive) verbs, and by recording the verb that occurred with these cases of overt marking i.e., DOM, these verbs provided a basis to search for the un-marked or *a*-less tokens. This method allowed for identifying unmarked tokens in a feasible and relevant manner, providing the necessary un-marked cases to accurately analyze DOM using Goldvarb. Additionally, this methodology permits a more replicable procedure by which tokens may be extracted in likewise fashion in future research. As a result of this methodology, particular cases fall outside the envelope of variation. Transitive verb tokens co-occurring solely with unmarked DOs, lacking marked token counterparts, were excluded from the analysis. Only explicit cases where the preposition *a* marks an accusative object were counted; other uses of the preposition *a* were excluded. Any case where DOM could not be determined was excluded.

2.1. Factor Groups

The semantic and pragmatic factors that have been frequently attributed as motivating overt marking of the direct object were operationalized in order to be suitable for multivariate analysis. Operationalizing the factors also makes readily transparent the relative ranking of factors influencing DOM in Spanish. All the tokens extracted from the data for the Varbrul analysis were coded for the following factors, which have been grouped into Local and Global categories following Laca (2006):

Local Factor Groups

- Animacy of Direct Object– the animacy of the direct object was coded based upon the animacy scale: human, animate, inanimate
- Specificity of Direct Object – specificity of the DO was determined by following Laca 2006 and von Heusinger & Kaiser (2003), a DO was specific if the referent was a uniquely identifiable referent from the speaker’s perspective. If the referent was not uniquely identifiable, it was non-specific. Per this metric, generics count as non-specifics.
- (Noun) Form of the Direct Object – the type of NP of the DO referent was divided into two groups: proper noun, lexical noun
- Mass vs. Count Noun – following the claim for individuated objects, the DO was coded for mass/count distinction.
- Number – also a measure for individuation, DOs were coded for singular vs. plural

Global Factor Groups

- Relative Animacy – this compares the animacy status of the subject and the animacy status of the DO using the animacy scale *human > animate > inanimate* (see Comrie 1979, Næss 2007). For example: *El partido reúne a los amigos*. In this case the DO, *amigos*, (human) is higher than the S, *el partido* (inanimate) and is coded as a as such.
- Discourse status of Direct Object – this is a discourse pragmatic property, based upon whether the DO referent is or is not associated with a definite expression that can be identified with an already introduced discourse item (von Heusinger & Kaiser 2003)

Finally, I would make one critical comment regarding the problematic notion of “Definiteness” in the linguistic and DOM literature. Those familiar with the DOM literature will expect definiteness to be a crucial factor in any quantitative analysis since much of the foundational literature on DOM, e.g. Bossong (1991), Aissen (2003) and Torrego (1999) among others, assumes the importance of definiteness. The frequent assumption regarding definiteness is that definite expressions are necessarily specific and only within indefinites may specific and non-specific referents be realized.

However, in approaching DOM, particularly in Spanish, it is apparent that “definiteness” is a conflated term, mixing the semantics of specificity with the deictic properties of determiners, i.e., definite vs. indefinite expressions are determined based on the morphology: *the, a, these, some*, etc. This is particularly problematic for Spanish because the use of definite and indefinite articles does not coincide consistently with specific and non-specific referents. I am not alone in questioning the assumption of the general concept of Definiteness i.e., specificity is only hyponymous to indefinite expressions (cf. Lyons 1999, Pensado 1995). Therefore, I operationalize the concept of Definiteness frequently assumed in the DOM literature, by separating it into two distinct factor groups: one being Specificity which, refers to the unique identifiability of the referent, and the other, the NP form of the DO. In this way I am able to capture the relative features of Definiteness as commonly referenced in the DOM literature by using the factor groups of NP form and Specificity. These two factors can then be analyzed as independent factors as asserted by Lyons (1999), von Heusinger and Kaiser (2003) and others.

3. Results

An initial analysis of the data presents a useful reference for evaluating the dialectal distribution of DOM. Table 1 below shows the overall distribution and total number of tokens culled from the corpora:

Table 1. Overall Distribution of *a*-marking, all dialects

	<i>a</i> -marked	Non <i>a</i> -marked	Total N
Buenos Aires	39% (275)	61% (339)	614
Madrid	33% (216)	67% (345)	561
Mexico City	36% (169)	64% (301)	470

There is a statistically significant difference between the dialects of Buenos Aires, Madrid and Mexico City in overall rate of *a*-marking ($\chi^2=9.57$, $p < .008$, $df = 2$). However, it is important to remember that per the methodology of this paper, these frequencies do not take into account verbs that did not occur with *a*-marking in the corpora analyzed, and therefore the figure for *a*-marked DOs are higher than others reported in the literature (e.g. Company 2002).

Varbrul analysis was carried out using GoldVarbX (Sankoff, Tagliamonte, & Smith 2005), resulting in the configuration of significant factor groups presented in Table 2, Table 3 and Table 4 below. Table 5 summarizes the information of Tables 2-4, including the relevant factors in each dialect and their relative constraint rankings.

Table 2. Factors Contributing to the Use of *a* in Buenos Aires

Input = .302; Log likelihood = -174.591

		Prob	% a-marked	N	% of data
Relative Animacy					
	Equal or DO greater	.75	73%	300	49%
	Subject unspecified	.63	27%	44	7%
	Subject greater	.21	4%	270	44%
	<i>Range</i>				
	53				
Animacy of DO					
	Animate	.77	78%	275	45%
	Inanimate	.27	8%	339	55%
	<i>Range</i>				
	50				
Specificity of DO					
	Specific	.61	46%	431	30%
	Non-specific	.26	22%	183	70%
	<i>Range</i>				
	35				
Form of DO					
	Proper Noun	.77	76%	152	25%
	Lexical Noun	.43	27%	462	75%
	<i>Range</i>				
	34				

Table 3. Factors Contributing to the Use of *a* in Mexico City

Input = .169; Log likelihood = -106.695

		Prob	% a-marked	N	% of data
Animacy of DO					
	Animate	.91	83%	187	40%
	Inanimate	.18	5%	283	60%
	<i>Range</i>				
	73				
Relative Animacy					
	Subject unspecified	.86	45%	53	11%
	Equal/DO greater	.78	79%	174	37%
	Subject greater	.22	3%	243	52%
	<i>Range</i>				
	64				
Specificity of DO					
	Specific	.75	45%	236	50%
	Non-specific	.25	27%	234	50%
	<i>Range</i>				
	50				
Form of DO					
	Proper Noun	.73	61%	85	18%
	Lexical N	.45	30%	385	82%
	<i>Range</i>				
	28				

Table 4. Factors Contributing to the Use of *a* in Madrid

Input = .179; Log likelihood = -164.494

		Prob	% a-marked	N	% of data
Relative Animacy					
	Equal/DO greater	.82	75%	198	35%
	Subject unspecified	.61	37%	67	12%
	Subject greater	.25	3%	296	53%
	<i>Range</i>			57	
Animacy of DO					
	Animate	.82	77%	216	38%
	Inanimate	.28	5%	345	62%
	<i>Range</i>			54	
Form of DO					
	Proper Noun	.73	57%	106	19%
	Lexical Noun	.43	27%	455	81%
	<i>Range</i>			30	

Table 5. Summary of Significant Factor Groups, by dialect

Buenos Aires	Mexico City	Madrid
1. Relative Animacy	1. Animacy of DO	1. Relative Animacy
2. Animacy of DO	2. Relative Animacy	2. Animacy of DO
3. Specificity of DO	3. Specificity of DO	3. Form of DO
4. Form of DO	4. Form of DO	

4. Analysis & Discussion

An initial pass of the results in Table 5 reveals that a remarkable similarity across the three dialects is observed when considering the relative ordering of factor groups selected as significant. Looking at Table 5 the following becomes apparent:

- Animacy (at some level), is the primary factor favoring DOM.
- Relative Animacy, a global factor, more strongly favors DOM in Buenos Aires and Madrid dialects than the local factor of animacy (of the DO).
- Noun Form is significant for all three dialects and falls into the same place within the constraint hierarchy.
- Specificity is significant for the dialects of Mexico City and Buenos Aires and occupies the same constraint ranking, while it is conspicuously absent in the Madrid dialect.
- With the exception of the inversion of factor groups Animacy and Relative Animacy in the Mexico City data, the ordering of factor groups is the same for all three dialects.
- The constraint hierarchies and relative magnitude of the factor groups Animacy, Relative Animacy and Form of the DO across the dialects are remarkably similar.

4.1. Factor Weights and Shared Grammars

Table 6 compares the factor weights of the selected factor groups across the three dialects, providing significant insight into the underlying grammar of DOM. The relative homogeneity of favoring factor groups reveals a common grammar of *a*-marking across dialects of Spanish. This is

strongly corroborated by the nearness of factor weights and similarity of ranges of the shared factor groups as shown.

Table 6. Dialectal comparison of constraint rankings based upon factor weights

	Buenos Aires	Madrid	Mexico City
Relative Animacy			
Equal or DO greater	.75	.82	.86
Subject unspecified	.63	.61	.78
Subject greater	.21	.25	.22
<i>Range</i>	53	57	64
Animacy of DO			
Animate	.77	.82	.91
Inanimate	.27	.28	.18
<i>Range</i>	50	54	73
Specificity of DO			
Specific	.61	N/A	.75
Non-specific	.26	N/A	.25
<i>Range</i>	35		
Form of DO			
Proper Noun	.77	.73	.73
Lexical N	.43	.43	.45
<i>Range</i>	34	30	28

Table 6 reveals how similar these dialects are in several ways with two important exceptions: the Mexico City data show an extremely strong effect regarding the animacy of the DO alone, more so than Relative Animacy in the other two dialects. The other exception is that Specificity appears to have no effect on DOM in the Madrid dialect. While there are convincing similarities in what the DOM grammars look like across these three dialects, some subtle but appreciable distinctions persist. Data from additional dialects will support or modify these findings and represents an important task for further investigation.

4.2. Animacy and Relative Animacy

Both Relative Animacy (of the Subject and the DO) and the Animacy of the DO were selected as the two most significant factor groups (as reflected in the *Range*) in all three dialects, albeit with reverse ordering in the Mexico City data. But how independent are the effects of these two factor groups, given that the animacy of the DO is necessarily a subpart of the classification according to relative animacy? In other words, can these two factor groups be considered orthogonal in any way? Or are they just reflecting the same tendency towards *a*-marking on animate DOs?

Crosstabulations of the Relative Animacy and Animacy of DO show that there is an independent effect of Relative Animacy on **inanimate** DOs. The overall rate of *a*-marking on inanimate DOs is very low in all dialects (8% (26/339) in Buenos Aires; 5% (18/345) in Madrid and 15% (13/283) in Mexico), but the rate of *a*-marking on inanimate DOs when the DO is equal in animacy to the Subject (i.e. both inanimate) is considerably higher across dialects (albeit the number of tokens in each dialect is low), at 35% (14/40) for Buenos Aires, 32% (7/15) for Madrid and 25% (4/16) for Mexico.

In addition, the rates of *a*-marking found when the DO is of greater animacy than the Subject (i.e. when the DO is necessarily human/animate and the Subject is not), as exemplified in (3) and (4),

- (3) Sí, cuáles son los valores que rigen **a** esa gente (HCBA, 121)
‘Yes, what are the values that govern those people’
- (4) [la televisión] reúne **a** la familia. (HCM, 120)
‘[television] gathers the family’

also suggest an independent effect for Relative Animacy. In Buenos Aires, 26/28 (93%) of such DOs were *a*-marked, while in Madrid 10/11 (91%) were marked. Both of these figures are considerably higher than the overall rate of *a*-marking for animate DOs in these dialects, which were 78% and 77% for Buenos Aires and Madrid, respectively. In the case of Mexico City, the constraint rankings indicate that it is the animacy of the DO that most strongly favors marking and the distribution of the data corroborates this: while 11/14 (78%) DOs with greater animacy than the subject were *a*-marked, this is actually less than the overall rate of *a*-marking for animate DOs in the Mexico City corpus (83%). From this evidence I conclude, there is a clear independent effect of Relative Animacy on *a*-marking in Buenos Aires and Madrid.

4.3. Form of DO

The noun form of the DO was the other factor group favoring *a*-marking in the dialects. Table 7 shows the percentage of animate *a*-marked DOs based on the form of the noun.

Table 7. Effect of Noun Form on *a*-marking of animate DOs, all dialects

	Lexical Noun	Proper Noun
Buenos Aires	68% (106/157)	92% (109/118)
Madrid	71% (109/154)	92% (57/62)
Mexico City	69% (108/156)	94% (48/51)

There are no significant differences among the dialects for either the Lexical Noun or Proper Noun classes with regard to *a*-marking of animate DOs. But as the table shows, there is a statistically significant difference in the frequency of *a*-marking between Lexical Nouns and Proper Noun. In addition, the rate of *a*-marking in animates for Proper Noun overall ranges between 92-94%, which is considerably higher than the rate for all animates at 78-83%. However, for inanimate DOs across the dialects, Noun Form has no tangible effect; all inanimate DOs are rarely *a*-marked no matter what their lexico-morphological form (8% overall in Buenos Aires; 5% overall in both Madrid and Mexico City).

4.4. Specificity

Can independent effects of the additional favoring factors in Buenos Aires and Mexico City Spanish be determined? Or are these simply interacting with another FG, e.g. Animacy? While it has been argued that Specificity is a marginal factor in *a*-marking (Leonetti 2004, Brugè & Brugger 1996), the data in Table 8 show that the overall rate of *a*-marking in the class of animate DOs is different across the dialects, recalling that Specificity was only selected as a significant factor group in the Buenos Aires and Mexico City data, not in those from Madrid.

Table 8. Rate of *a*-marking in animate DOs across dialects, by Specificity

	Specific	Non-Specific
Buenos Aires	88% (175/200)	53% (40/75)
Madrid	79% (141/178)	66% (25/38)
Mexico City	96% (96/99)	68% (60/88)

However, this cross-dialectal difference mainly manifests itself in the subclass of specific, animate DOs (Table 9), as exemplified by (5) and (6):

- (5) a su vez él observa **a** la señorita [.....] (HCBA, 165)
 ‘At the same time, he observes Miss [.....]’
- (6) que me gustaría ir a buscar **a** mi madre a casa (HCM, 400)
 ‘I would like to go look for my mother at home’

Table 9. Variation in marking of specific, animate DOs, by dialect

	<i>a</i> -marked	Not <i>a</i> -marked
Buenos Aires	88% (175)	12% (25)
Madrid	79% (141)	21% (37)
Mexico	96% (96)	4% (3)

$\chi^2=7.684, p < .02, df = 2$

This is especially germane to how DOM is manifest in Spanish. The findings in Table 9 reveal that specificity is indeed an important feature that motivates marking. This has been frequently claimed in the literature and this quantitative analysis corroborates those claims. In the case of non-specific, animate DOs, variable marking between dialects (i.e. the rightmost column in Table 8 above) was not statistically significant ($\chi^2 = 4.06, p = .13$).

5. Conclusions & Further Investigation

This paper has offered a variationist perspective on the semantic, pragmatic and syntactic features that motivate and constrain *a*-marking of direct objects in Spanish across three distinct dialects. Most importantly, it has provided quantitative evidence to address the claims made in the DOM literature regarding the statistically significant factors of animacy, noun form, specificity and the statistically insignificant factors of number, mass/count distinction and information status (i.e. Definiteness following von Heusinger & Kaiser 2003). The principal contribution of this paper is providing quantitative evidence to support a hypothesis that multiple factors contribute to DOM in Spanish. In Laca's terms, they can be characterized as local and global factors (2006) that affect the distribution/realization of DOM in Spanish. Kliffer (1984,1995) had intimated at a hierarchy of factors that may override one another, with animacy having priority and the data has corroborated this hypothesis in general terms. The analysis has shown that both local (specificity, animacy, form of the DO) and global factors (relative animacy) are involved in DOM. Furthermore, in the cases of the dialects of Buenos Aires and Madrid, there is evidence to support the claims of both Kliffer and Laca, in that a global factor, relative animacy, maintains precedence over local factors in determining DOM.

This paper also presents crucial insight as it relates to key assumptions (and debates) regarding the relevance of specificity to DOM in Spanish. While many have supported the claim that specificity is a motivating factor for DOM (von Heusinger & Kaiser 2003, Brugè & Brugger 1996), or assumed specificity within the concept of definiteness (Aissen 2003, Torrego 1999, Laca 2003), others have argued against the sensitivity of DOM in Spanish to specificity (Leonetti 2004). Clearly, the evidence supports a description of *a*-marking in Spanish that recognizes specificity as defined in this research, at least in two prominent dialects. However, I would comment that Leonetti's argument against specificity is not precisely incongruent with my own approach; in fact we share the common assumption that specificity can only be determined via the discourse, and not based upon the morphological form of the NP referent. Leonetti's primary evidence is that *a*-marking still can obtain in non-specific, indefinite, human referents, taking the strong argument that if specificity fails as a property in any case where *a*-marking obtains, it cannot be a factor in DOM. For Leonetti, specificity is "pragmatically inferred on the basis of the procedural semantics of such devices [DOM in Spanish] and information taken from sentential context and communicative situations." (pg. 110). I agree with him, however this is insufficient to discount specificity as related to DOM if the factor of specificity can be determined in the discourse. The quantitative undertaking of this paper has shown specificity, as determined within the discourse, to be a relevant factor for at least two dialects of Spanish.

Directly implicated in this discussion of specificity is the correlated concept of Definiteness frequently ascribed to DOM (Aissen 2003) i.e., based on the form and presuming specific and non-specific readings. The findings of this paper give quantitative support confirming the relevance of Definiteness to DOM: this concept was deconstructed in the present study into the separate factor groups of specificity and NP form for quantitative purposes, with the result that both were found significant in the regression analysis. This evidence corroborates the assumption that Definiteness does indeed contribute to *a*-marking. However, my findings are critically important in reconsidering how

definiteness is understood. The definiteness effect presumed by many to correlate to DOM arises from the fact that definiteness is a conflation of two independent factor groups that favor DOM in Spanish: NP form (in all three dialects) and specificity (in Buenos Aires and Mexico City).

From a dialectal perspective, the value of these findings is rooted in providing a quantitative description of the underlying grammars of these three dialects. Importantly, the data bear out the general assumption that Buenos Aires does appear to have exceptional *a*-marking, with both a greater frequency of marking and marking of atypical referents (inanimates) compared to the other dialects. Additionally, it is clear that the DOM grammars of these three dialects are very similar but not categorical, each manifests unique characteristics that may have significant implications for broader syntactic and pragmatic features in other areas of the grammars of these dialects..

A critical finding of this paper is the significance of relative animacy to DOM. The findings are compelling evidence to rethink our conceptualization of the role of animacy of the DO in *a*-marking: animacy needs to be reevaluated in the broader linguistic phenomenon of DOM, particularly the relevance of the animacy of the subject in relation to that of the DO, i.e. relative animacy. Comrie (1989:128) identifies precisely this relationship in making this cross-linguistic claim regarding DOM:

“Although in principle either A [agent] or P [patient] can be either animate or definite, it has been noted that in actual discourse there is a strong tendency for the information flow from A to P to correlate with an information flow from more to less animate, and from more to less definite. **In other words, the most natural kind of transitive construction is one where the A is high in animacy and definiteness, and the P is lower in animacy and definiteness; and any deviation from this pattern leads to a more marked construction.** This has implications for a functional approach to case marking: the construction which is more marked in terms of the direction of information flow would also be more marked formally...”
(Emphasis added)

The independence, or at least partial independence, in the data of the factor group Relative Animacy, on the one hand, and Animacy of the DO, on the other, provides corroborating evidence for Comrie’s view.

This quantitative approach to the variation manifest in Spanish DOM has shown that *a*-marking is not exclusive to the realm of animacy. While this is not a new insight, this paper has explored specific factors and features that provide quantitative evidence showing independent effects beyond animacy in favoring *a*-marking. Given these findings, it seems clear that multivariate analysis is necessary for a comprehensive analysis of DOM in Spanish, and most likely in other languages too.

Finally, a remaining concern of this investigation is the difficulty of quantifying discourse pragmatic factors. While information status failed to attain significance, much of the literature continues to intuitively support the relevance of vague discourse properties such as topicality (Leonetti 2004, Laca 2006). I remain convinced that this can be shown quantitatively. It may be that the information status of referents as I operationalized it is insufficient for capturing meaningful functions of DOM. The challenge persists in finding a way to account for these discursive intuitions in quantitative terms and continues to be a significant area for future DOM research.

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