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Differential object marking in Spanish: Does affectedness really matter? *

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1. Introduction

Differential object marking (DOM) is the selective marking of direct objects based on their semantic or pragmatic properties, or a combination of these. Cross-linguistically, the most commonly attested correlates of DOM include animacy and definiteness (cf. Bossong 1985; Aissen 2003). In Spanish, the presence of the marker *a* in (1a) correlates with animacy, as shown by its contrast with (1b), which lacks the marker while differing only in the animacy of the object.

- (1) a. *Conozco #a) esta chica.* b. *Conozco (#a) esta película.*
 know:1SG DOM this girl know:1SG DOM this movie
 ‘I know this girl.’ ‘I know this movie.’

In Spanish, however, animacy is not the only factor influencing DOM. Other well-known factors include referentiality and topicality, which can be grouped together with animacy under the broader notion of *individuation* (cf. von Heusinger and Kaiser 2003, 2007). Since individuation alone cannot sharply distinguish [+DOM] from [-DOM] cases, additional factors have been sought. Von Heusinger and Kaiser 2007 and von Heusinger (2008) propose that verbs’ selectional restrictions on their objects also play a role: verbs selecting human objects are more likely to appear with DOM than verbs that take both animate and inanimate ones.

Another proposed factor is *affectedness* (in the sense of Tsunoda 1985): the higher an object ranks on the affectedness hierarchy, the more likely it is to appear with DOM (cf. von Heusinger 2007; von Heusinger and Kaiser 2011; Heredero and García 2023). This idea is illustrated in (1), where verbs entailing greater affectedness on the object (*beat*, *murder*) seem to favor DOM, while those entailing less affectedness (*see*, *find*) do not.

- (2) *Golpearon/asesinaron* ??ø/a un turista.
 beat.3PL/killed:3PL ø/DOM a tourist
 ‘They beat/murdered a tourist.’
- (3) *Vieron/encontraron* ø/a un turista.
 saw.3PL/found:3PL ø/DOM a tourist
 ‘They saw/found a tourist.’

This paper challenges the claim that affectedness influences DOM in Spanish. Based on a quantitative corpus analysis of DOM rates across verbs differing in affectedness and

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nouns varying in animacy and referentiality, we show that while DOM correlates strongly with animacy and referentiality, it does not correlate with affectedness.

2. The background

DOM is a widespread phenomenon. By 1985, it was attested in more than 300 languages (Bossong 1985). Its most common semantic correlates, acting independently or jointly, include animacy, definiteness, specificity, individuation, and topicality (Comrie 1979; Bossong 1985; Aissen 2003; Bossong 2011; Iemmolo 2010; Pensado 1995; Dalrymple and Nikolaeva 2005, 2011; Givón 1984). For all these properties (arguably including affectedness), the generalization holds that the more pronounced the feature, the higher the likelihood of DOM (e.g., definite nominals are more often marked than indefinite ones, animates more often than inanimates).

Being a case-marking strategy, DOM naturally reflects alignment. In nominative–accusative languages, the nominative case usually corresponds to the unmarked form, and accusative, the case commonly marking patients, is derived through additional morphology. In ergative–absolutive systems, the absolutive case, also encoding patients, is the unmarked form. Consequently, DOM, which relies on morphological differentiation of the object, has no structural basis in ergative languages. Such languages tend instead to exhibit *differential subject marking*, where ergative subjects are more likely to be overtly marked when high in animacy or definiteness (Aissen 2003; de Hoop and Malchukov 2008).

DOM is also linked to word order. It occurs more frequently in languages with flexible word order than in those with rigid word order (Comrie 1989; Bossong 2011; Croft 2002; Song 2014; Iemmolo 2010). In languages lacking overt case, encoding of grammatical relations depends heavily on fixed word order, whereas case marking allows movement freedom by signaling grammatical roles morphologically.

Research on DOM seeks to answer two major questions: (i) why languages employ DOM rather than consistent case marking, and (ii) why DOM correlates cross-linguistically with certain semantic and pragmatic features such as animacy and referentiality. As for (i), Bossong (2011) argues that DOM develops as an economical replacement of a full-fledged case system (e.g., the shift from elaborate case system of Latin to DOM in Spanish). As for (ii), two broad explanatory frameworks have been proposed: transitivity accounts and ambiguity accounts.

Following Hopper and Thompson (1980), transitivity is understood not as a property of the verb alone but of the entire clause, depending on factors such as the object's affectedness and individuation. A clause is maximally transitive when the object is highly individuated and strongly affected. Hopper and Thompson (1980) further assume that individuation and affectedness are interconnected: an individuated object is more easily affected. The more transitive is the clause, the more likely the object is to be morphologically marked. Næss (2004, 2007) goes one step further, arguing that DOM directly encodes affectedness, with animacy and definiteness derived from it. This view predicts that verbs entailing high affectedness should favor DOM, a prediction our data will show not to hold.

In contrast, ambiguity-based approaches (e.g., Comrie 1979; Aissen 2003; Bossong 1985) see DOM as a disambiguating device distinguishing subjects and objects. DOM appears on objects with subjectlike features (animacy, definiteness, topicality), which overlap with canonical subject properties and could otherwise lead to ambiguity. Aissen

(2003) formalizes this intuition: DOM increases when object properties resemble those of subjects and when subject–object differentiation in the clause becomes less transparent.

Ambiguity accounts do not consider verb meaning as a factor affecting DOM and therefore predict no correlation with affectedness. In Spanish, DOM strongly correlates with animacy and referentiality. The two are interconnected and often treated as part of a single scale of *individuation* (Laca 2006; von Heusinger and Kaiser 2011; Heredero and García 2023). Topicality, while also relevant, largely follows word order: left-dislocated, topical objects obligatorily bear *a*, while in-situ focal objects may not.¹

Several studies have extended the analysis beyond these core dimensions. Von Heusinger and Kaiser (2007) and von Heusinger (2008) argue that DOM is sensitive to selectional restrictions verbs impose on their objects: verbs preferring animate objects show more DOM than those that select inanimates. Furthermore, von Heusinger and Kaiser (2011) claim that affectedness also contributes, grouping verbs into affectedness classes following Tsunoda (1985). They find that verbs with higher affectedness show earlier and more frequent DOM historically, though with many exceptions (e.g., perception verbs show higher DOM rates than some verbs of physical impact).

More recent experimental work (Heredero and García 2023) uses a force dynamic notion of affectedness (the object as recipient of force) (Croft 1991; Jackendoff 1990). Speakers preferred DOM with affected objects (88%) over non-affected ones (75%), leading the authors to conclude that affectedness promotes DOM. However, both the [+affected] and [–affected] verb classes are semantically heterogeneous, and the results are internally inconsistent: [–affected] verbs like *amar* ‘love’ and *oír* ‘hear’ show higher DOM rates than many [+affected] ones. Moreover, as in earlier work, only animate objects were considered, making it impossible to disentangle affectedness from animacy.

2. The study

This section formulates the predictions suggested by previous studies claiming a correlation between affectedness and DOM and outlines the approach adopted to test them. Specifically, we conduct a corpus-based analysis examining how DOM patterns align with the fine-grained affectedness hierarchy proposed by Beavers (2011), while controlling for animacy and referentiality.

2.1. Affectedness and DOM: Predictions and expectations

Setting aside the shortcomings of previous approaches, let us assume, following the authors reviewed above, that affectedness indeed motivates DOM. If this assumption is correct, we should expect the relation to hold not only under a coarse binary distinction (e.g., affected vs. non-affected) but also when affectedness is treated as a more fine-grained scalar notion. To test this, we adopt the model proposed by Beavers (2011), who defines affectedness in terms of the degree of change the object undergoes during the event.

According to Beavers (2011), affectedness is determined by how precisely a verb specifies a change in the object along some scalar dimension, such as location, existence, or physical state. Crucially, affectedness is not merely a matter of whether change occurs, but of how fully that change is specified within the verb’s lexical meaning. Beavers distinguishes four degrees of affectedness, ordered as follows:

¹ Since our corpus study excludes non-canonical word order, topicality is not further analyzed.

(4) Affectedness Hierarchy

Quantized change > *non-quantized change* > *potential change* > *unspecified for change*
(*break, shatter, devour*) (*widen, cool, cut*) (*hit, punch, rub*) (*see, laugh at, follow*)

Verbs unspecified for change denote actions that do not involve physical contact or do not cause immediate impact on the undergoer. These roughly correspond to the [–affected] class in Heredero and García (2023) and to midrange classes on Tsunoda’s (1985) hierarchy, as used by von Heusinger and Kaiser (2011). The remaining three categories, quantized, non-quantized, and potential change, provide finer distinctions within the broader [+affected] class assumed in earlier studies.

If affectedness indeed triggers DOM, verbs entailing a higher degree of affectedness (e.g., quantized change) should display higher DOM rates, while those expressing lower degrees (e.g., potential or unspecified change) should show lower rates, once animacy and referentiality are controlled.

2.2. Methodology

To test this prediction, we analyzed data from the Spanish Google Ngram Viewer corpus, which contains approximately 158.9 billion tokens from a broad range of published texts. Although biased toward Peninsular Spanish, its scope and lexical diversity make it suitable for tracking morphosyntactic patterns such as DOM. The corpus returns normalized relative frequencies by year, enabling quantitative comparison of DOM and non-DOM variants.

Fourteen verbs were selected to represent the four affectedness levels, following Beavers (2011) and including several verbs from previous studies:

- (i) quantized change: *abatir, arrollar, matar, romper, asesinar*;
- (ii) non-quantized change: *arrastrar, herir, cortar, mojar*;
- (iii) potential change: *apalear, empujar, golpear*;
- (iv) unspecified for change: *ver, escuchar*.

For each verb, six high-frequency direct object nouns were chosen from the corpus, representing human, animal, and inanimate referents. To control for referentiality, definite, indefinite, and bare forms were retrieved separately, in both singular and plural. This design enabled the analysis of DOM across all combinations of animacy, referentiality, and number.

Searches were conducted using the infinitive verb form, which proved most stable across combinations. For each verb–noun pair, minimal pairs contrasting DOM and non-DOM variants (e.g., *ver a la mujer* vs. *ver la mujer*) were submitted as single queries. Ratios were calculated manually from normalized frequencies to account for zero counts that prevent automatic computation. The time span was set to 1960–2020, with smoothing of 30, producing stable frequency averages centered at 1990.

Despite its large scale, the corpus presents some limitations. It contains only written data, though no major DOM differences are known between spoken and written Spanish. Because it primarily represents Peninsular Spanish, some dialectal variation may be underrepresented, but DOM is not known to vary systematically across dialects. Finally, only canonical verb–object sequences were analyzed. Constructions involving dislocation

or fronting were excluded to avoid interference from topicalization, meaning that focus-driven or discourse-related DOM patterns fall outside the present scope.

3. Results and discussion

3.1. Affectedness

We first consider a representative excerpt of the data and then turn to the statistical evaluation of the entire dataset.

Table 1 shows [+DOM]/[−DOM] ratios for six definite singular objects paired with verbs representing different affectedness levels.

Affectedness-Verb	<i>el hombre</i> 'the man'	<i>la mujer</i> 'the woman'	<i>la gente</i> 'the people'	<i>animal</i>	<i>inanimate</i>
3 - <i>mojar</i> 'to wet'		100%			0
2 - <i>golpear</i> 'to hit'	100%	100%	100%	100%	0.01
2 - <i>apalea</i> 'to beat'	100%		100%		0
4 - <i>arrollar</i> 'to crush'	100%		100%		0
3 - <i>herir</i> 'to wound'	100%		199	97	0.52
4 - <i>asesinar</i> 'to murder'	100%	100%	49		
2 - <i>empujar</i> 'to push'	100%	100%	29		0
4 - <i>matar</i> 'to kill'	31	33	71	3.2	0
4 - <i>abatir</i> 'to knock down'	19		1.5	100%	0.35
3 - <i>arrastrar</i> 'to drag'	17.5				5
1 - <i>escuchar</i> 'to hear'	13	20	0.003		0.2
1 - <i>ver</i> 'to see'	10.5	10.3	3		0.0015
3 - <i>cortar</i> 'to cut'	1.6	100%	10.6	0.95	0
4 - <i>romper</i> 'to break'	0.44		0.36		1.57

Table 1: Affectedness and DOM: definite singular nominals

The verbs in the leftmost column are preceded by a number indicating their degree of affectedness: 1 = *unspecified for change*, 2 = *potential change*, 3 = *non-quantized change*, and 4 = *quantized change*. The following columns show [+DOM]/[−DOM] ratios for definite singular nouns such as *el hombre* 'the man', *la mujer* 'the woman', and *la gente* 'the people', as well as representative animal and inanimate nouns. Empty cells reflect the absence of occurrences in the corpus; 100% indicates categorical DOM presence, 0 indicates its absence.

If affectedness influences DOM, we should expect that the same nominal shows higher DOM ratios with verbs entailing greater affectedness. However, Table 1 shows no consistent correspondence between affectedness and DOM.

For instance, *matar* 'to kill', which entails maximal affectedness, has lower DOM ratios than *golpear* 'to hit' or *herir* 'to wound', both ranked lower on the affectedness scale. Conversely, perception verbs like *ver* 'to see' and *escuchar* 'to hear, to listen', the least affectedness-entailing verbs, exhibit higher DOM rates than verbs such as *romper* 'to break' or *cortar* 'to cut'. The same pattern holds across other noun types.

This inconsistency also appears within affectedness classes: among quantized-change verbs (Class 4), DOM ratios range from 0.44 for *romper* 'to break' to 100% for *asesinar* 'to murder'. Even verbs with identical result states, such as *matar* 'to kill' and *asesinar* 'to murder', behave differently: *asesinar* consistently shows categorical DOM

with definite human objects, while *matar* exhibits far lower ratios. These results suggest that affectedness, as operationalized here, does not account for the observed variation.

To test this quantitatively, we calculated Spearman’s rank correlations between affectedness level and [+DOM]/[−DOM] ratios for each verb–noun pair, across twelve *animacy* × *referentiality* combinations (human/animal/inanimate × definite/indefinite/bare). The measure is nonparametric and robust to zeros (no-DOM) and infinities (all-DOM).

Ten of the twelve strata showed no reliable association; two displayed weak, negative correlations, contrary to prediction (higher affectedness → lower DOM). Key results are summarized in Table 2.

Instance	Spearman’s ρ	p -value	N
human × bare PL	−0.44	0.02	24
inanimate × DEF.PL	−0.48	0.04	15
(pooled) bare PL	−0.27	0.05	45
human × DEF.SG	0.19	0.29	41
Overall (all pooled)	−0.08	0.23	123

Table 2: Correlation between affectedness and DOM

Across the dataset, correlations are negligible and non-significant ($|\rho| < 0.3$). Only three cases show significance, all weak and negative. We therefore conclude that affectedness is not a reliable predictor of DOM once animacy and referentiality are controlled. Any residual effects are likely mediated by other factors, not by affectedness per se.

3.2. Referentiality and number

DOM in Spanish correlates strongly with referentiality: definite objects are more likely to bear DOM than indefinite ones, which in turn are more likely than bare nominals lacking identifiable discourse antecedents. To assess this quantitatively, we compared [+DOM]/[−DOM] ratios for definite, indefinite, and bare forms within identical verb–noun combinations, while controlling for number.

Because singular bare nouns and plural indefinites are rare and the latter are semantically different, we conducted three pairwise comparisons: (i) definite vs. indefinite singulars; (ii) definite vs. bare plurals; and (iii) singular vs. plural definites. Spearman’s ρ was computed for each.

Comparison	Spearman’s ρ	p -value	N
(i) Def.SG vs. Indef.SG	0.85	< 0.001	39
(ii) Def.PL vs. Bare.PL	0.85	< 0.001	32
(iii) Def.SG vs. Def.PL	0.83	< 0.001	34

Table 3: Correlation between DOM, referentiality, and number

The results reveal significant high positive correlations ($\rho \approx 0.83$ – 0.85). Verbs and nouns that frequently take DOM with definite objects also tend to take it with indefinite and bare ones. The near-equivalence between (iii) and (i)/(ii) indicates that number patterns mirror referentiality. However, number does not act independently: singulars are typically more individuated and thus more referential than plurals. We therefore interpret number as a

feature feeding into referentiality rather than as a distinct DOM trigger. These results confirm that referentiality remains one of the strongest predictors of DOM in Spanish.

3.3. Animacy

Our data likewise confirm the correlation between animacy and DOM. Table 4 summarizes mean [+DOM]/[−DOM] ratios for humans, animals, and inanimates across referentiality levels.

Animacy	DEF.SG	DEF.PL	INDEF.SG	Bare PL
human	7.33	10.36	5.14	0.78
animal	4.18	1.41	1.32	0.01
inanimate	0.24	0.16	0.16	0.17

Table 4: DOM and animacy across referentiality levels

A clear animacy gradient emerges: DOM decreases from humans to animals to inanimates. To confirm this pattern, we fitted a mixed-effects logistic regression with *animacy* as a fixed effect and random intercepts for *verb* and *noun*. Results show strong animacy effects: compared to inanimates, animals are about 9–10 times more likely to take DOM, and humans about 32 times more likely. Within animates, humans are roughly 3.4 times likelier than animals. These values correspond to probabilities of 0.8–0.9 for humans, 0.6–0.8 for animals, and 0.15–0.2 for inanimates, consistent with the well-established pattern human > animal > inanimate.

Animacy thus determines whether DOM is possible at all, while referentiality modulates its frequency. Within the animate domain, referential contrasts (definite vs. indefinite, singular vs. plural) account for more variation than the human–animal distinction, confirming that referentiality exerts the stronger gradient effect once animacy is fixed.

3.4. Selectional restrictions

As noted in Section 1, von Heusinger and Kaiser (2007) proposed that DOM correlates with verbs’ selectional restrictions: verbs selecting human objects should show higher DOM than those selecting animates or inanimates. Our data, however, do not support a reliable effect. Spearman’s $\rho = 0.37$ ($p = 0.33$), indicating only a weak, non-significant trend. The likely reason is the small number of verbs available for comparison.

4. Broader implications

Our corpus study has shown that DOM in Spanish does not correlate with affectedness, contrary to previous claims (von Heusinger and Kaiser 2011; Heredero and García 2023). Instead, it confirms that animacy and referentiality jointly determine DOM. These findings support ambiguity-based approaches and challenge transitivity-based accounts that tie DOM to high affectedness and event transitivity (Hopper and Thompson 1980; Næss 2004, 2007).

Under ambiguity approaches, DOM serves to disambiguate subjects and objects. Two versions can be distinguished: a *weak* version (Bossong 1985), where DOM marks objects with subject-like properties (high animacy, high referentiality), and a *strong* version (Aissen 2003), where DOM depends on two factors, subject-like object properties and clause-level subject–object differentiation. When both arguments share similar animacy and referentiality, DOM appears on the object to ensure distinct interpretation.

Although ambiguity accounts do not consider verb meaning, the strong version is, in our view, compatible with an analysis on which verb meaning contributes clause-level subject-object disambiguation. Consider *asesinar* ‘to murder’ and *matar* ‘to kill’: both entail identical result states, but differ in participant selection. *Asesinar* requires two human participants, while *matar* allows inanimate subjects.

- (5) *Un loco / La bomba mató (a) 17 personas.*
 a crazy person / the bomb killed DOM 17 people
 ‘A crazy person / The bomb killed 17 people.’
- (6) *Un loco / #La bomba asesinó (a) 17 personas.*
 a crazy person / the bomb murdered DOM 17 people
 ‘A crazy person / The bomb murdered 17 people.’

In configurations like (5), animacy alone disambiguates grammatical roles: the inanimate must be the subject, the animate the object. By contrast, *asesinar* always involves two human participants competing for subject and object interpretation. Similarly, as shown in (7)–(8), *matar* allows any animate object, while *asesinar* favors humans exclusively.

- (7) *Pedro mató a su vecino / perro.*
 Pedro killed DOM his neighbor / dog
 ‘Pedro killed his neighbor/dog.’
- (8) *Pedro asesinó a su vecino / #perro.*
 Pedro murdered DOM his neighbor / dog
 ‘Pedro murdered his neighbor/dog.’

Thus, verbs’ selectional restrictions reduce or heighten the need for DOM depending on how they constrain possible argument roles. For *matar*, animacy cues are sufficient for disambiguation; for *asesinar*, they are not. This aligns with our data, which show higher DOM rates for *asesinar* than for *matar*. We therefore suggest that selectional restrictions, both on subjects and on objects, can be modeled as feeding into clause-level disambiguation pressure. In this way, verb semantics fits naturally within the strong ambiguity approach: not as an independent DOM trigger, but as a factor influencing when disambiguation through DOM becomes necessary.

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