

Priming effects in the use of *más* + negative constructions: A quantitative analysis of oral data

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Goal

- This paper examines the role of priming in the use of [*más* + negative word] constructions.
- The analysis contributes to the understanding of the effects of recency of use in the pattern of variation involving [*más* + negative word] constructions.
- This research has implications on how priming facilitates connections between representation of meaning and syntactic forms.

The phenomenon

(1) No estudié más nada sino hasta sexto grado. (CC4FD_87)

(2) Estudié hasta sexto grado nada más. (CC4FD_87)

‘I only studied until sixth grade, no more.’

(3) Primero, me dijo que ... iba a tener cuatro niñas, más nada, y que no buscara varón porque no lo iba a tener. (CB5FD_87)

(4) Entonces me dijo que yo iba a tener cuatro niñas nada más, que no buscara más porque no lo iba a tener. (CB5FD_87)

‘First, he/she told me that I was going to have four daughters, no more, and that I shouldn’t expect a boy because I wasn’t going to have him.’

- Pre-posing of *más* attested in the following varieties of Spanish: Andalusia, the Canary Islands, Venezuela, Argentina, Cuba, Puerto Rico (Blanch, 1964: 85; García Cornejo, 2008; Kany, 1945; Lipski, 2005: 298; Pharies, 2006: 202, Rosenblat, 2004, amongst others)
- Specifically attested in Venezuela (García Cornejo, 2008; Rosenblat, 1956)

History of the variants

- *Nunca* and *ninguno* were the first to occur with pre-posing (García Cornejo, 2008).
 - *Más ninguno* surfaced in the 13th and 14th century.
 - *Más nunca* first appeared in the 14th and 15th century.
 - *Más nada* emerged in the 16th century.
 - *Más nadie* first appeared in the 19th century.
- All four variants became restricted to Atlantic Spanish in the 19th and 20th centuries. (based on a search on CORDE and CREA and on very limited data)
- Other Romance varieties that have pre-posing:
 - Gallego-portuguese (*nada*, *ningún* and *nunca*)
 - European Portuguese (all)
 - Brazilian Portuguese (Silver, 1948: 425; Gomes de Matos, 1967: 495, Peake 2014).

Generative work on *más* + [negative word]

- Syntactic constraints

- Only purely negative sentences allow preposing of *más*

5) *Porque yo voy a bailar con quien a mí me agrade, **más nada**.* (CD4MC_87)

‘Because I’m going to dance with whoever I want, nobody else.’

- Preposed *más* cannot be used with a focal interpretation

6) *El tranvía **más nada**, era lo que había.* (CD5FA_87)

‘Only the tram is what was there.’

- Comparative constructions with adjectives can only contain postposed *más*

7) No hay **[nada más]** terrible que sufrir en vano.

8) *No hay **[más nada]** terrible que sufrir en vano. (Gutiérrez-Rexach & González-Rivera, 2012)

Generative work on *más* + [negative word]

- Semantic constraints
- Inability to continue (agentivity)
 - There is a semantic inference that the agent is unable to continue the action when *más* is preposed (Gutiérrez-Rexach & González-Rivera, 2012).
 - 9) Pepe no comió [**nada más**].
'Pepe did not eat anything else.'
 - 10) Pepe no comió [**más nada**].
'Pepe did not eat anything else [and he could not eat anything else]
 - 11) No leyó [**más nada**].
'He did not read anything else'. (Gutiérrez-Rexach & González-Rivera, 2012: 290)

Generative work on *más* + [negative word]

- Different presuppositions

12) No leeré [**nunca más**] libros de Vargas Llosa.

‘I will not read books by Vargas Llosa anymore.’

13) No leeré [**más nunca**] libros de Vargas Llosa.

‘I will not read books by Vargas Llosa ever.’ (Gutiérrez-Rexach & González-Rivera, 2012: 290)

14) **Que me caí una vez y me rompí el brazo [risas], que patinamos, y más nunca quise patinar.** (CA2FB_87)

‘One time I fell and I broke my arm [laughter], we were skating and never again did I want to skate.’

- Examples show that preposed *más* can be used even when information is available to show the event has taken place before.

Variationist research

- Two variationist studies have operationalized these constraints in Spanish (Díaz-Campos & Zahler, 2013) and Brazilian Portuguese (Peake, 2014, Peake and Schwenter, 2014):
 - Polarity → Only purely negative sentences allow preposing.
 - Comparative → Comparative phrases only allow postposing.
 - Position of *más* + negative word in comparison to verb → Focal constructions only allow postposed *más*.
 - Animacy → Only subjects that are agents allow preposed *más*.
 - Person and number of the subject → 1 and 2 are correlated to animacy and favor preposed *más*.
 - Verb type → Transitive and prepositional complement verbs also correlate with animacy and favor preposed *más*.

Variationist research

- Díaz-Campos & Zahler (2013):
 - Found that polarity was the only linguistic factor constraining variation
 - 36% of affirmative sentences had preposed *más*
 - Not enough comparative sentences for statistical analysis, but no *más nada* in comparatives
 - Generative explanations do not completely account for variation
- Peake (2014) Schwenter and Peake (2014):
 - Positioning according to verb, polarity and comparatives constrained variation
 - Complex interactions between position to verb and polarity, as well as comparatives and position to verb
 - Constraints cannot be transferred from Spanish to Portuguese
- If not formal accounts, then what is conditioning variation in this variety of Spanish?

Structural priming

- Speakers' tendency to use previously heard or produced syntactic structures in subsequent production (Ferreira & Bock, 2006).
- Structural priming has been shown to occur when there are shared lexical items (Pickering & Branigan, 1998).
- Also occurs between sentences with similar syntactic structure yet with semantic differences (Bock & Loebell, 1990).
- As such, we would expect there to be a priming effect of *más* + negative word constructions, as well as other collocations involving *más*.
 - Claro, aquí era fácil, todo, uno no más ... tú comprabas tus cosas y ... lo más necesario, más nada. (CA5FC_87)
 - Que te va dando la realidad de la vida, de ser un poco más realistas, más nada, más pacientes, valorar las cosas más, ese tipo de actitudes. (CB1FC_87)

Priming studies on other Spanish and Portuguese constructions

- Priming has been shown to have an effect on other morphosyntactic structures in Spanish and Portuguese such as:
 - Subject pronoun expression
 - Priming has been shown to constrain the use of null versus overt subject expression (Abreu, 2012; Flores-Ferrán, 2002; Cameron & Flores-Ferrán, 2004; Torres Cacoullos & Travis, 2010; Travis 2005; Travis, 2007)
 - Imperfect subjunctive variation
 - A preceding –se favors a following –se while a preceding –ra favors a following –ra (Schwenter, 2013)
 - Present perfect and preterit
 - Previous uses of present perfect triggers more present perfect Holmes and Balukas (2011)
 - Estar + Gerund (Progressive)
 - Strong priming effect (Berry 2014)
 - Subject-Verb Agreement
 - Marking leads to further marking (Scherre and Naro 1993)

Research questions

- What is the role of structural priming in the variable position of *más* in [*más* + negative word] constructions in Spanish?
- What are the possible implications of a priming effect in the use of [*más* + negative word] constructions?
 - What is the prototypical use of [*más* + negative word] ?
 - What is the effect of priming in non prototypical contexts?

Method

Dependent variable

- All tokens containing the following constructions:
 - *Más + nada/nadie/nunca/ninguno*
 - *Nada/nadie/nunca/ninguno + más*
 - *Only variable contexts were included. Nadie and ninguno only appeared with preposed más.*

Independent linguistic variables

- Polarity →
 - Only purely negative sentences allow preposing.
- Comparative →
 - Comparative phrases only allow postposing.
- Position of *más* + negative word in comparison to verb →
 - Focal constructions only allow postposed *más*.
- Animacy →
 - Only subjects that are agents allow preposed *más*.
- Person and number of the subject →
 - 1 and 2 are correlated to animacy and favor preposed *más*.
- Verb type →
 - Transitive and prepositional complement verbs also correlate with animacy and favor preposed *más*.
- Priming →
 - Coded as 3 clauses back

Independent extralinguistic variables

- Age
- Sex
- Socioeconomic level (significant in Díaz-Campos & Zahler [2013])

Data

- The data
- Estudio sociolingüístico de Caracas (1987) [financed by the Consejo de Desarrollo Científico y Humanístico de la Universidad Central de Venezuela]
- Half-hour interviews, conducted in 1987 and 1988
- 160 speakers
- Born and raised in Caracas, with parents also from Caracas
- Divided evenly among four age groups, both genders and five socioeconomic groups

Results

Descriptive statistics

[negative word + *más*] is more predominant in the corpus.

Table 1: Distribution of [más + negative word] and [negative word + más]

	Más + negative word	Negative + más	Totals
N	168	213	381
%	44	56	100

Multivariate Analysis

Table 2: Multivariate analysis of the internal and external factors selected for [más + negative word]

Corrected mean			0.44
Log likelihood			-225.647
Significance			0.043
Total			381
	Weight	%	No
Polarity			
Negative	0.79	75	71/95
Affirmative	0.39	34	97/286
Range	40		
Priming (3 clauses)			
Same	0.68	56	21/36
Neutral	0.49	44	143/329
Different	0.30	25	4/16
Range	38		
Socioeconomic class			
Middle	0.60	54	111/205
Lower	0.41	36	41/115
Upper	0.33	26	16/61
Range	27		

Priming*polarity

Polarity	Token count	Preceding postposed	No prime	Preceding preposed	Total
Affirmative tokens	Preposed tokens	1 8.3%	82 33.6%	14 50%	98 34.1%
	Postposed tokens	11 91.7%	164 66.4%	14 50%	189 65.9%
	Total	12 100%	246 100%	28 100%	287 100%
Negative tokens	Preposed tokens	3 75%	61 73.5%	7 87.5%	71 74.7%
	Postposed tokens	1 25%	22 26.5%	1 12.5%	24 25.3%
	Total	4 100%	83 100%	8 100%	95 100%
Total tokens	Preposed tokens	4 25%	143 43.6%	21 58.3%	169 44.2%
	Postposed tokens	12 75%	186 56.4%	15 41.7%	213 55.8%
	Total	16 100%	329 100%	36 100%	381 100%

Discussion

Polarity

- The formal analysis proposed that negative constructions would favor [*más* + negative word].
 - The argument is that linguistic units indicating grade/degree may be moved from their natural syntactic context and *más* can only be preposed in purely negative sentences since postposed *más* would differ in having focal interpretation (*sólo* 'only')
 - We found quantitative evidence that preposed *más* is favored in negative sentences (0.78). However, we also found that this is not a categorical pattern since 36% of the cases have *más nada type of constructions* in affirmative sentences with an interpretation that may be considered focal.

15) **Me tomo un palito, tres palitos, y más nada.**

I have a drink, three drinks, nothing else. (CD4MC_87)

In usage-based perspective we suggest that this finding implies that negative contexts represent the prototypical context of [*más* + negative word] schema.

Priming

- Structural priming significantly constraint the use of [*más* + negative word], so that repetitions of previous instances of collocations of preposed *más* favor its subsequent use.
 - Ustedes saben lo que llaman los desvíos, más nada, el tranvía más nada, era lo que había. (CD5FA_87)
 - Ya no busco más nada, ya no deseo más nada. (CD4MB_87)
- Neutral contexts where there is not priming neither favor nor disfavor the use of [*más* + negative word].
- Contexts in which there are preceding [negative word + *más*] constructions disfavor preposing.

Priming

- These findings provide more evidence for priming effects, which can be considered an implicit learning mechanism that reflects the way speakers experience language (Bock et al. 2007) as well as vary in the use of it.
- The priming effects found have important implications for arguing that the origin of this structure may be based in an analogy with other frequent constructions in which *más* is preposed such as [*más* + adjective] (e.g., *más bonita*) or [*más* + noun] (e.g., *más coca cola*).
 - Después de ahí seguí jugando pelota, claro, un poquito más ... como se dice, un poquito más penoso, porque, claro, me habían regañado y, bueno, jalado las orejas bastante duro. Y después de ahí, bueno, comencé a jugar pelota y esas cosas. , más nada. (CA5MC_87)
 - Me suspendieron por dos semanas a mí nada más. (CA5MC_87)

Conclusions

- What is the role of structural priming in the variable position of *más* in [*más* + negative word] constructions in Spanish?
- We have found that priming has a significant effect in predicting [*más* + negative word] constructions since a previous instance of the structure favors its use.
- What are the possible implications of a priming effect in the use of [*más* + negative word] constructions?
- It has been argued in the literature that structural priming emerges because features of meaning are linked to syntactic configurations through implicit learning (Ferreira and Bock 2006)
- We suggest that usage of structures in context has a central role in the process of linking meaning and structures.

Conclusions

- The priming effects found have important implications for arguing that the origin of this structure may be based in an analogy with other frequent constructions in which *más* is preposed such as [*más* + adjective] (e.g., *más bonita*) or [*más* + noun] (e.g., *más coca cola*).
 - Después de ahí seguí jugando pelota, claro, un poquito más ... como se dice, un poquito **más penoso**, porque, claro, me habían regañado y, bueno, jalado las orejas bastante duro. Y después de ahí, bueno, comencé a jugar pelota y esas cosas. **, más nada**. (CA5MC_87)
- Priming may be activating the knowledge of specific syntactic configurations as they are used in context to express a particular conceptualization (Ferreira and Bock 2006).

Conclusions

- What is the prototypical use of [*más* + negative word] ?
- The findings show that negative contexts are prototypical for [*más* + negative word]. Priming does not play as much of a role in negative contexts.
- What is the effect of priming in non prototypical contexts?
- Priming has stronger effect in affirmative contexts where variations is more prevalent.

Future directions

- Extend the analysis to other frequent collocations that shows how [*más* + negative word] may be the product of a template where *más* is preposed (e.g. *más bonita*, *más grande*, *más tarde*). This kind of template may be influencing analogical leveling of [*más* + negative word].
- Propose a comparative analysis with other varieties where this phenomenon is documented.
- Expand our analysis to historical corpora to trace the pattern of variation.
- Expand our analysis to other synchronic corpora to increase the predictive power of the model

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Variation is more common with nada

Distribution of [más + negative word] according to type of negative word

