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# Spanish Negative Concord Items: Experimental Evidence for their Status as Strict Negative Polarity Items

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Received:	Abstract
07/02/2024	This study investigates the semantic status of Spanish Negative Concord
Accepted:	Items (NCIs) through their comparison with English Negative Quantifiers
26/03/2024	(NQs) and Polarity Items (PIs) in acceptability judgment tasks conducted
	among native speakers of Spanish and English. NCIs exhibit a dual
	behaviour depending on their syntactic context, which has resulted in various
Keywords:	analyses that categorize them as NQs, PIs, or non-negative indefinites. The
Negation; Negative	findings from this investigation provide experimental confirmation that
concord items; Polarity	Spanish NCIs behave like strict Negative Polarity Items (NPIs) or indefinites
items; Negative	that are exclusively licensed by a syntactically local anti-veridical operator
quantifiers; Spanish;	(i.e., negation). This experimental approach sheds light on the longstanding
Acceptability judgment	controversy surrounding the semantic characterization of Spanish NCIs and
task.	contributes to our understanding of their behaviour across a wide array of
	linguistic contexts.

## **1. INTRODUCTION**

The semantic status of Spanish negation-related expressions has been the subject of much debate in the literature. Depending on the syntactic context, negation-related expressions like *nadie* 'n-body' or *nada* 'n-thing' exhibit a dual behaviour: in preverbal position, they do not require the overt negative marker *no* 'not' and behave like negative quantifiers (NQs) (e.g., *nobody, nothing, never*, etc.), whereas in postverbal position they always require it and behave like Polarity Items (PIs) (e.g., *anybody, anything, ever*, etc.). I will henceforth refer to these expressions as Negative Concord Items (NCIs) (Déprez et al., 2015; Etxebarria et al., 2018; Giannakidou, 2020) because it captures the relationship in which these items participate (i.e., Negative Concord), where negation is interpreted only once despite being expressed by multiple items in the sentence. The relevant contrast is exemplified in (1)-(2).

(1)	a.	Nadie	llegó				
		N-BODY	arrive	PAST			
		'Nobody arrived.'					
	b.	*Nadie	no	llegó			
		N-THING	NEG	arrive-PAST			
(2)	a.	No lleg	ó	nadie			

NEG arrive-past N-THING 'Nobody arrived.' \*Llegó nadie arrive-past N-THING

b.

The dual behaviour of Spanish NCIs in (1)-(2) has long puzzled linguists, leading to numerous hypotheses and analyses regarding their semantic status. Some view them as inherently negative quantifiers (Zanuttini, 1991; Haegeman and Zanuttini, 1991), while others assume that they are PIs (Bosque, 1980; Laka, 1990), akin to English PIs such as *anyone* or *anything*. More recently, they have been conceptualized as indefinites which must be syntactically licensed by anti-veridical operators (i.e., negation, adversative predicates, and *without* PPs) (Zeijlstra, 2004; Tubau, 2008; Vergara and López, 2017)<sup>1</sup>.

As I will discuss in Section 2, none of these approaches are free of shortcomings. Those analyses that assume that Spanish NCIs are NQs can easily explain cases like those in (1). That is, if NCIs are NQs this explains their ability to express negation in a preverbal position and their inability to co-occur with the overt negative marker no 'not'. However, extra machinery is needed to account for the cases in (2), where postverbal NCIs are illicit without an overt negative marker. The approaches that treat NCIs as non-negative universal quantifiers have no problems accounting for the quantifier-like behaviour of NCIs in preverbal positions, but the existential readings of these items in most postverbal positions are problematic. On the other hand, approaches that treat NCIs as PIs can account for the cases in (2) but suffer from two crucial problems. First, they resort to a covert negative operator that c-commands and takes scope over the Spanish NCI to explain cases such as (1), however, if the use of this operator is not restricted, nothing prevents cases like (2b) from being acceptable and interpreted as negative, contrary to fact. Second, PIs have been reported to be licensed in a wider variety of contexts than NCIs (see Giannakidou, 2000; Zeijlstra, 2004). Lastly, treating NCIs as nonnegative indefinite handles cases like (2), but requires clarification about why NCIs are interpreted as negative in the preverbal position.

Vallduví (1994) conducted a descriptive study examining the status of Spanish NCIs, across the following contexts: isolation, modified by *almost* or *absolutely*, in preverbal position, in yes/no questions and conditionals. He concluded that the distinct behaviour of NCIs compared to PIs across all contexts provides evidence against those approaches that categorize NCIs as PIs. However, he did not find enough differences in the behaviour of NCIs and NQs across all contexts to warrant rejecting approaches that treat NCIs as NQs. Moreover, he suggested that his descriptive findings are also compatible with those approaches that treat

- NQs in preverbal position and PIs in postverbal position. However, the assumption that Spanish
- native speakers possess two phonologically identical entries for NCIs with different feature
- compositions seems unwarranted. Although I will not discuss this approach in this paper, I refer
- the reader to the studies have argued against this approach for a more extensive discussion (see
- Laka, 1990; Zanuttini, 1991; Zeijlstra, 2004).

<sup>&</sup>lt;sup>1</sup>Some other approaches (Herburger, 2001) argue that Spanish NCIs are lexically ambiguous: they are

NCIs as non-negative indefinites. From this brief introductory discussion, it becomes apparent that the status of Spanish NCIs is still a matter of controversy and requires further investigation through experimental validation.

To the best of my knowledge, most studies regarding the status of Spanish NCIs, including Vallduvi's, have been descriptive in nature and have not undergone experimental testing. The current study aims to address this gap by examining the acceptability of NQs and PIs among native speakers of English, as well as NCIs among native speakers of Spanish, across a wide variety of testing contexts that build upon those outlined in Vallduvi's (1994) original study. This allows for a more comprehensive comparison of the behaviour of Spanish NCIs, English NQs, and PIs. The overarching goal of this study is to provide experimental confirmation that Spanish NCIs are indeed strict Negative Polarity Items (NPIs). In other words, indefinites are only licensed by a syntactically local anti-veridical operator (i.e., negation, adversatives, *without* PPs, etc.).

# 2. LITERATURE REVIEW

# 2.1.English NQs and PIs

In English, negation is expressed through a single sentential negative marker *not* (3a) or NQs like *nobody/no one, nothing,* and *never*.

- (3) a. Liam did not watch television.
  - b. Nobody watched television.
  - c. Liam saw nobody watching television.
  - d. What did Liam watch? Nothing.

In addition, NQs can appear on their own in preverbal (3b) and postverbal positions (3c) as well as in fragment answers (3d). When NQs co-occur with the negative marker or another NQ, they yield a Double Negative (DN) reading—typically avoided in standard English—instead of a Negative Concord (NC) one, as shown in (4). This is a testament to the inherently negative status of English NQs. The only way for a sentence like (4) to convey an NC reading in English is by using PIs (*anyone, anything, ever*, etc.), as illustrated in the contrast between (4) and (5).

(4) Liam did not see nobody watching television.

DN: Liam saw someone...

\*NC: Liam did not see anyone...

(5) Liam did not see anyone watching television.

\*DN: Liam saw someone...

NC: Liam did not see anyone...

Moreover, PIs cannot form a negative sentence by themselves and cannot be used in fragment answers, as shown in (6) and (7). In fact, these items can only be licensed in a particular set of contexts, namely, non-veridical ones. According to Giannakidou (2006), non-veridical contexts are those that do not guarantee the truthfulness of a proposition in an individual's epistemic model (e.g., yes/no questions, conditionals, disjunctions, verbs of volition, etc.). A subset of these non-veridical contexts is negation, which introduces anti-veridical contexts contexts that entail the falsehood of a preposition in an individual epistemic model (Giannakidou, 2006). I provide examples of PI licensing in non-veridical contexts in (8) and (9) respectively.

- (6) \*Liam saw anyone watching television.
- (7) What did Liam watch? \*Anything
- (8) Did anyone watch television?
- (9) If anyone watches television, please let me know.

PIs also exhibit a remarkable flexibility in their licensing in non-veridical contexts, allowing them to be licensed long distance and even across syntactic islands (e.g., adjuncts), as shown in (10) and (11) respectively.

- (10) I don't think that Liam saw anyone watching television.
- (11) Liam did not watch television while anyone was watching it.

Crucially, unlike English NQs, PIs are considered to be non-negative and interpreted existentially in all contexts in which they appear (see Bosque, 1980; Laka, 1990; Giannakidou, 2006; among others).

# 2.2. Previous analyses of Spanish NCIs

In the following subsections, I describe Spanish NCIs through a discussion of the three competing analyses about their semantic status, which culminates with a discussion of Vallduví's (1994) descriptive study on the status of Spanish NCIs.

# 2.2.1. NCIs as Negative Quantifiers

This approach was first introduced by Zanuttini (1991) and Haegeman and Zanuttini (1991). In their analyses, they consider Spanish NCIs to be inherently negative with the properties of universal quantifiers. More precisely, they assume that sentential negation hosts its own functional projection NegP ( $\Sigma$ P in Laka (1990); PolP in Tubau (2008) and Vergara and López, 2017) and that NCIs must move—either overtly or covertly—to the specifier position of this projection to satisfy the *NEG Criterion* in (12).

# (12) The NEG Criterion

- a. A NEG operator must be in a Spec-Head configuration with an  $X^0$  [NEG].
- b. An  $X^0$  [NEG] must be in a Spec-Head configuration with a NEG operator.

(Haegeman and Zanuttini, 1991, p. 244)

Under this approach, preverbal NCIs can satisfy the NEG Criterion directly, finding themselves in a specifier-head relation with the [neg] head in NegP. Postverbal NCIs on the other hand need to covertly move to this position to satisfy the NEG Criterion. This specifier-head configuration allows NCIs to function as inherently negative quantifiers. To account for cases like those in (13) where multiple NCIs can combine within a sentence to convey a single negative interpretation, Haegeman and Zanuttini (1991) propose the negative absorption rule in (14). This rule posits that multiple NCIs merge together into a unified NQ that quantifies over multiple variables simultaneously.

(13) Nadie ha visto nada nunca

N-BODY has seen N-THING N-EVER 'Nobody has seen anything ever.'

(14) Negative Absorption rule:  $[\forall x \neg] [\forall y \neg] [\forall z \neg] \rightarrow [\forall x, y, z] \neg$ 

Haegeman and Zanuttini's analysis can also account for the negative interpretation of Spanish NCIs when they occur on their own as fragment answers, see (15).

(15) ¿Quién vino? Nadie'Who came? Nobody.'

However, their assumption that NCIs are inherently negative is not without its challenges. If we entertain the notion that all NCIs are inherently negative, then we should expect them to be able to express negation on their own in all contexts. Nonetheless, examples like (2b) above, where postverbal NCIs in Spanish cannot appear without the negative marker, show that this is not the case.

Another argument against Haegeman and Zannuttini's approach is that their negative absorption rule does not account for cases in which two NCIs cancel each other out yielding a DN reading. This would predict that DN readings should never obtain in NC languages like Spanish. However, Espinal and Prieto (2011), Tubau and Espinal (2012) and Prieto et al. (2013) show that DN readings are uncommon but possible in Spanish, as shown in (16).

(16)	Nadie	cree	que	nunca	hayas	vivido	en	Perú
	N-BODY	believe-3SG.PRSNT.IND	that	N-EVER	have-subj	lived	in	Peru
	DN: 'I	t is not the case that so	meone	believes	s that you never	r lived i	n Peru. <sup>?</sup>	,

Additionally, the approaches that treat NCIs as universal quantifiers have problems to account for examples like (17a), where preverbal NCIs seem to behave like existential quantifiers. Notice that in (17) the NCI *nadie* can be replaced by the non-negative existential quantifier *alguien* 'someone', as illustrated in (17b).

(17)	a.No	creo	que	nadie besara	a	а	Juan		
	NEG	believe-prsnt.ind	that	N-BODY kiss-p	AST.SUBJ	ACC			
		'I don't think that anyone kissed Juan.'							
	b. No	creo	que	alguien	besara		a	Juan	
	NEG	believe-prsnt.ind	that	SOMEONE	kiss-pa	ST.SUBJ	ACC		
		'I don't think that someone kissed Juan.'							

# 2.2.2. NCIs as Polarity Items

This type of analysis was first presented in Bosque (1980) and adopted in Laka (1990). They assume that NCIs are PIs, that is, existential expressions that are licensed by an operator of a specific semantic type. The negative marker, an operator under this approach, licenses NCIs only in negative contexts.

Laka (1990) accounts for the distribution of NCIs in Spanish by postulating the existence of a Sigma Phrase ( $\Sigma P$ ) projection which she claims is merged above the Tense Phrase (TP), and hosts not only the negative marker but other polar particles as well (cf. PolP in Tubau

(2008) and Vergara and López (2017)). Laka argues that in cases where NCIs are postverbal, negative markers occupy the head  $\Sigma$ . Conversely, when NCIs are preverbal, the same head is filled with a phonologically null negative operator, and the NCI occupies the specifier position of  $\Sigma P$ . Laka postulates that this covert negative operator contributes to sentential negation in these cases, thus maintaining that NCIs are non-negative in every context. Laka's (1990) proposal for preverbal NCIs is illustrated in (18).

(18) [<sub>ΣP</sub> NCI [<sub>Σ'</sub> ¬Op [<sub>TP</sub>...]]]

Laka (1990) posits that this covert negative operator is also responsible for the negative interpretation of NCIs in fragment answers such as (15) above. However, Herburger (2001) challenges this position, arguing that postulating such an operator is problematic. Herburger suggests that this covert negative operator must be selectively applied to avoid the unintended interpretation of affirmative sentences, such as *Yo compro pan* 'I buy bread', as negative.

Following Bosque (1980), Laka also points out that Spanish NCIs can appear in other non-veridical contexts such as questions and conditionals, however, the examples that she provides to support her claim are scarce and inaccurate. The example in (19) is taken from Laka to illustrate that Spanish NCIs can be licensed in non-veridical contexts such as indirect questions. Nonetheless, the NCI in (19) is preverbal and according to her analysis, the covert negative operator should be sufficient to license the Spanish NCI.

(19) Me preguntaron si nadie sabía la respuesta.'They asked me whether nobody knew the answer.'

(Laka, 1990, p. 111)

Additional examples of NCI licensing in non-veridical contexts such as yes/no questions (20a) and conditionals (20b), are presented in Bosque (1980). Bosque contends that examples like (20) provide evidence supporting the notion that NCIs can indeed be licensed in such contexts, with a non-negative existential reading similar to English PIs.

(20)	a.	¿Habías visto nada semejante?
		'Had you seen anything like that?'
	b.	Si encuentras a nadie igual, cásate con él.
		'If you find anybody similar to him, marry him.'

(Bosque, 1980, p. 28)

Still, examples like (20) are scarce in the literature and, to the best of my knowledge, have not been empirically tested with a large population of Spanish native speakers. Zeijlstra (2004, p. 211) challenges these judgments and points out that the behaviour of NCIs is crucially different to that of English PIs. Moreover, he argues that treating NCIs like PIs when they display dissimilar behaviour presents significant challenges, as it requires additional explanatory mechanisms to address the differences between the two.

# 2.2.3. NCIs as non-negative indefinites

Building upon Ladusaw's (1992) framework, which proposes that NCIs are non-negative indefinites, Zeijlstra (2004) argues that there are two types of negation, namely, semantic, and

syntactic negation. He claims that semantic negation takes place in DN languages like Standard English, where either two NQs or a negative marker and a NQ yield a positive reading due to a one-to-one mapping between NQs and negative operators. On the other hand, syntactic negation occurs in NC languages like Spanish. According to Zeijlstra (2004), NCIs in NC languages mark the presence of either an overt—in the case of postverbal NCIs—or covert negative operator—in the case of preverbal n-words.

Under Zeijlstra's analysis, NC can be explained in terms of syntactic agreement. He proposes that NCIs are non-negative indefinites that must enter into an agreement relation with the sentential negative marker or other anti-veridical operators in the structure. According to Zeijlstra (2004), NCIs carry an uninterpretable feature [uNeg], which must be checked against the interpretable feature [iNeg] of the negative marker in the head of the NegP projection. Thus, the feature [iNeg] is assigned to elements that are semantically interpreted as negative and the [uNeg] feature to non-negative NCIs. His approach straightforwardly explains why only one negation is interpreted semantically in sentences like (21) from Italian.

 $\begin{array}{ccccc} (21) & \left[ {_{NegP} \left[ {non_{\left[ {iNEG} \right]}} \right]\left[ {_{TP} ha} & telefonato & a & nessuno_{\left[ {uNEG} \right]} \right]} \right] \\ & &$ 

As shown in (21) the Italian NCI *nessuno* is semantically non-negative and must check its [uNeg] feature against the [iNeg] feature of the sentential negative marker *non*. This agreement relationship ensures that the [uNeg] feature on the NCI is checked and deleted, which results in the single negation interpretation of the sentence in (21). In addition, Zeijlstra (2004) assumes that the [uNeg] feature of several NCIs can be checked against the [iNeg] feature of the negative marker simultaneously. This explains why the same negation can license several NCIs, as in the Spanish example in (22).

(22) Cristina no ha dicho nada a nadie NEG has said N-THING ACC N-BODY 'Cristina hasn't said anything to anyone.'

To account for the negativity that NCIs display when they appear in a preverbal position, Zeijlstra draws upon the proposals of Laka (1990) and Ladusaw (1992), suggesting that in the absence of an overt sentential negative marker, preverbal NCIs are licensed by a covert negative operator carrying the [iNeg] feature. This is illustrated in the Italian example in (23), where the [uNeg] feature of the NCI *nessuno* in NegP triggers the negative operator carrying [iNeg]. This covert operator is responsible for checking and deleting the [uNeg] feature of both the preverbal NCI through agreement.

(23)  $[NegP[\neg Op_{[iNEG]}-Nessuno_{fuNEG}]][vP t_i ha telefonato a nessuno_{fuNEG}]$ 'No one called anybody.'

Zeijlstra further argues that a direct consequence of treating NC as syntactic agreement is that it should be subject to locality conditions. Consequently, NCIs should only be licensed by a negative marker or anti-veridical operator within their local domain (i.e., the clause). As shown in the Italian example in (24), this prediction is confirmed for embedded clauses in the indicative.

(24)Non detto che arrivato ho nessuno e said that has-IND arrived NEG have-1sG N-BODY DN: 'I haven't said that nobody has arrived.' \*NC: 'I haven't said that anyone has arrived.' (Zeijlstra, 2004, p. 266)

The fact that the only possible reading in (24) is the DN instead of the NC one shows that when the NCI is in the embedded clause it cannot participate in an agreement relationship with the negative marker in the matrix clause. Thus, in the absence of a local negative marker, the NCI in the embedded clause is licensed by a covert negative operator. This yields two negative interpretations: one for the negative marker in the matrix clause and another for the NCI in the embedded clause, thereby yielding a DN reading.

The only exceptions to this observation are instances of embedded subjunctive clauses, where NCIs in the embedded subjunctive clause seem to be able to be licensed by a negative marker in the matrix clause, as shown in (25) from Italian. However, Zeijlstra claims that this is because embedded subjunctive clauses are transparent and therefore not subject to locality conditions (see Zeijlstra (2004) for further argumentation and examples).

(25)	Non	pretendo	che	nessuno	dica	niente		
	NEG	expect	that	N-BODY	say-subj	N-THING		
	'I don't expect anyone to say anything.'							

Furthermore, if NCIs are indeed non-negative indefinites that must be licensed by a local antiveridical operator (e.g., the negative marker), as Zeijlstra claims, then we should expect them to not be licensed across syntactic islands (e.g., adjuncts and relative clauses). This prediction, however, has never been empirically tested for Spanish and presents a notable gap in the existing literature.

Nevertheless, Zeijlstra's analysis shares a common issue with Laka's (1990) approach. The assumption of a covert negative operator in the structure becomes problematic, as the insertion of such operators should be warranted only in the presence of substantial empirical evidence.

Another analysis that treats NCIs as non-negative indefinites is Tubau (2008). Following Zeijlstra, she assumes that the negative marker and other polarity particles occupy the head of a Polarity Phrase (PolP) projection ( $\Sigma$ P in Laka's (1990) analysis) which is located on top of TP in Spanish. Similar to Zeijlstra (2004), she proposes that NCIs carry an unvalued polarity feature Pol[] and that negative markers are the phonological realization of the feature Pol[neg]. Thus, under her view, preverbal NCIs must raise to the specifier position of PolP to participate in an agreement relationship with the Pol[neg] feature in the head of this syntactic projection. Postverbal NCIs, on the other hand, may get their feature checked in-situ through agreement with the Pol[neg] feature in PolP. Tubau (2008) posits that the phonological rule of Obliteration in (26), a rule specific to Spanish grammar, prevents the accidental repetition of the NCI and negative marker when they co-occur inside of the same PolP projection in preverbal contexts.

(26) [Neg]  $\rightarrow \emptyset / [Pol:Neg]$ 

(Tubau, 2008, p. 126)

The Obliteration rule proposed by Tubau eliminates the [neg] feature in the head of the PolP projection before it can be phonetically realized as the Spanish *no* 'not'. This explains why most native speakers of Spanish reject sentences like (27).

(27)	*Nadie	no	ha	venido
	N-BODY	NEG	has	come

In essence, Tubau (2008) proposes that the Pol[neg] feature corresponding to the sentential negative marker is an inherent component of the syntactic structure governing negative sentences in Spanish. However, only those cases with preverbal NCIs trigger the application of the rule in (26), which deletes the syntactic feature of the negative marker from the structure.

Vergara and López (2017) test the application of Tubau's obliteration rule for preverbal NCIs. Based on empirical data gathered from bilinguals' acceptability judgments of negative sentences in Basque-Spanish code-switching<sup>2</sup>, Vergara and López (2017) propose the refinement of Tubau's (2008) obliteration rule. They propose that rather than targeting the syntactic terminal Pol[neg], obliteration operates on the phonological realization of the Spanish negative marker /no/. Essentially, the deletion process of Vergara and López's obliteration rule in (28) affects the phonetic manifestation of the negative marker prior to articulation.

(28)  $/\text{no}/ \rightarrow \emptyset / [Pol:Neg]$ 

A conceptual advantage of the analyses in Tubau (2008) and Vergara and López (2017) lies in their ability to establish structural parallelisms between sentences containing preverbal and postverbal NCIs, all achieved without resorting to abstract negative operators (c.f. Laka, 1990: Zeijlstra, 2004). Nonetheless, none of these analyses make any relevant claims regarding the universal/existential status of Spanish NCIs (c.f. Zanuttini, 1991; Haegeman and Zanuttini, 1991; Laka, 1990).

# 2.2.4. Vallduví (1994)

As discussed in the previous subsections, there is controversy over whether NCIs are intrinsically negative or not and with respect to their quantificational nature. Nonetheless, I have shown that none of the considered approaches is free from shortcomings. Vallduví (1994) offered an initial exploration into understanding the nature of NCIs by utilizing four diagnostic tests gathered from the literature on NCIs and PIs to assess the three main hypotheses regarding the status of Spanish NCIs. The relevant hypotheses, which have been introduced in the previous subsections, are the following: (i) Spanish NCIs are NQs, (ii) Spanish NCIs are PIs;

<sup>&</sup>lt;sup>2</sup> Although space limitations prevent me from discussing the specifics of Vergara and López (2017)

analysis, I refer the reader to the original article for a detailed discussion of their analysis and its

implications.

and (iii), Spanish n-words are non-negative indefinites. The four tests employed in Vallduví (1994) are presented in (29).

(29) Diagnostic 1: Ability to occur in isolation (fragment answers).
Diagnostic 2: Ability to be modified by the adverbs *almost* or *absolutely*.
Diagnostic 3: Grammaticality in preverbal position.
Diagnostic 4: Ability to appear in *yes/no* and *if* contexts with a non-negative value.

Based on his own intuitions, Vallduví examined the distribution of Spanish NCI across the four diagnostic tests in (29)<sup>3</sup>. Table 1 presents a comprehensive summary of his findings for Spanish NCIs and compares their distribution to English NQs and PIs.

**Table 1.** Summary of Vallduvi's (1994) findings: a comparative analysis of negation-related expressions across diagnostic tests.

	Diagnostic 1	Diagnostic 2	Diagnostic 3	Diagnostic 4
Spanish NCIs	Yes	Yes	Yes	No
English NQs	Yes	Yes	Yes	No
English PIs	No	No	No	Yes

Based on the findings in Table 1, Vallduví reaches several conclusions. Firstly, he asserts that English NQs and Spanish NCIs function differently than PIs with respect to the contexts in which they appear. This observation leads him to reject those hypotheses that treat Spanish NCIs as PIs (Bosque, 1980; Laka, 1990). Instead, Vallduví contends that his findings align more closely with those hypotheses that treat Spanish NCIs as NQs (Zanuttini, 1991; Haegeman and Zanuttini, 1991). He bases this conclusion on the fact that NCIs behave like their English counterparts in all diagnostics and that they seem to allow modification by adverbs such as *almost* and *absolutely*. These adverbs have been argued to modify universal quantifiers but not existentials (see Horn, 1972). Additionally, he acknowledges that those hypotheses that treat NCIs as non-negative indefinites (Ladusaw, 1992) may also be viable options to account for the distribution of NCIs.

As evidenced by this discussion, Vallduvi's (1994) comparative investigation into the status of Spanish NCIs does not yield any definitive conclusions either. This highlights the need for further empirical research that expands on the diagnostics tests provided in Vallduví (1994) to shed a more nuanced light on the distribution and semantic status of Spanish NCIs.

## 2.3. Research questions, hypotheses, and predictions

This study presents an experiment that tests the acceptability that Spanish and English speakers assign to sentences containing Spanish NCIs, English NQs, and PIs across a variety of testing contexts (i.e., diagnostics) that build upon those in Vallduví's (1994) exploratory investigation. These contexts are introduced in (30).

(30) Diagnostic 1: Ability to occur in isolation.

paper since they are not relevant to the current discussion.

<sup>&</sup>lt;sup>3</sup> Vallduví (1994) also examines Catalan NCIs. However, I will not address these examples in this

Diagnostic 2: Ability to be modified by the adverbs *almost* and *absolutely*.

Diagnostic 3: Grammaticality in preverbal position.

Diagnostic 4: Ability to appear in yes/no and if contexts in postverbal position.

Diagnostic 5: Grammaticality in postverbal position without a negative licensor.

Diagnostic 6: Grammaticality in syntactic islands.

The purpose of this study is to provide experimental evidence that sheds light on the status of Spanish NCIs. The study is guided by the following research questions:

RQ1: Is there a difference between Spanish NCIs and English PIs?

RQ2: Is there a difference between Spanish NCIs and English NQs?

RQ1 is introduced to test whether Spanish NCIs exhibit behaviour akin to that of English PIs across all the contexts in (30) above. Specifically, it aims to determine if Spanish NCIs can be licensed in non-veridical contexts (e.g., yes/no questions and if clauses) and across syntactic islands, given that English PIs appear to be acceptable in these contexts, as discussed in Section 2.1. Confirming this would provide empirical support in favour of those hypotheses that treat NCIs as PIs, thereby rejecting alternative hypotheses suggesting that NCIs are NQs or non-negative indefinites.

RQ2 is introduced to test whether Spanish NCIs are NQs. If NCIs are English-like NQs, then we would expect them to behave the same across all contexts. In particular, if NCIs admit modification by the adverb *almost*, this may support their characterization as quantifiers. Overall, such findings would provide empirical evidence to reject those hypotheses that treat NCIs as non-negative indefinites as well as PIs.

However, it remains plausible that Spanish NCIs may exhibit a distinct behavior, neither conforming to the patterns of English PIs nor NQs. Such an outcome would provide evidence in support of those hypotheses that treat Spanish NCIs as non-negative indefinites who need to be licensed by local negation (i.e., strict NPIs).

# 3. METHODS

Part of the methodological design and experimental materials adopted in the current study come from Vergara's (2017) unpublished dissertation but have undergone refinements to enhance the reliability and clarity of its methodology and findings. However, the dataset and participants reported in the following sections are new and have not been previously published.

# 3.1. Participants

Two groups participated in this study: a group of 15 native speakers of Northern Peninsular Spanish and a group of 30 native speakers of English. All participants were asked to answer a short sociolinguistic questionnaire at the beginning of the experiment. More specifically, the questionnaire gathered information about their gender, age, place of birth, current location, knowledge of languages other than Spanish, and previous experiences living abroad. Participants in the native Spanish speaker group (8 women and 7 men, Mage = 24.58) had almost all acquired Spanish from birth and had lived in the northern region of Spain throughout their lives and reported to never have lived abroad for more than a year. They also reported having some knowledge of Basque, English, Galician, or French. Additionally, participants in the native English speaker group (17 women and 13 men, Mage = 20.80) were all students in

a large American University and had all acquired English from birth. They all reported to have never lived abroad for more than a year and having some knowledge of Spanish or French. The native English speaker group was randomly divided into two groups at the time of the experiment: 15 participants received sentences containing English NQs and the other 15 received sentences containing English PIs.

# 3.2. Experimental materials

The experimental materials consisted of 36 Spanish stimuli containing NCIs, 36 English stimuli containing NQs, and another 36 containing PIs. Each diagnostic test introduced in (30) was comprised of six stimuli. The first four tests included two lexicalizations for *nothing*, *anything*, and *nada*, two for *nobody*, *anybody* and *nadie*; and another two for *never*, *ever*, and *nunca*. To maintain consistency, the fifth and sixth tests omitted adverbial negation-related expressions (e.g., *never*, *ever*, *nunca*), which typically occur more naturally in preverbal positions in English. Additionally, the fourth test included three *yes/no* questions and three *if*-clauses, while the sixth included three adverbial adjuncts and three relative clauses. The target stimuli for the relevant diagnostic tests are provided in Appendix 1. All stimuli were translation equivalents across both languages.

A total of 120 filler stimuli were used as distractors, with 60 in English and 60 in Spanish. All distractors were also translation equivalents. Half contained number agreement mismatches within the DP and the other half corrected number agreement, as shown in (31).

- (31) a. \*Compré un bolsos en el centro comercial.
  'I bought a purses at the mall.'
  b. Compré unos bolsos en el centro comercial.
  - 'I bought some purses at the mall.'

# 3.3. Procedure and analysis

The experiment was presented to participants in an online survey format using *Qualtrics*, and this study reports only the data from those participants who completed the experiment in its entirety. First, all three groups (e.g., the Spanish, the English NQ, and the English PI) filled out the sociolinguistic questionnaire. Next, participants were provided detailed instructions on how to perform the acceptability judgment task followed by five practice trials using distractor stimuli. These instructions were designed following González-Vilbazo et al. (2013) to explain the idea of a linguistic judgment and familiarize participants with the task. I provide detailed explanations corresponding to each point on the 1-7 Likert in (32).

(32) 1 = This sentence doesn't look like something I would say/ I don't like this sentence at all/ This sentence is unnatural/ I would never use it in a conversation.

2 = This sentence looks like something that I would very rarely say/ I don't like this sentence/ I would probably never use it in a conversation.

3 = I neither like nor dislike this sentence.

4 = I might have said this sentence at some point/ I have heard other people say something like this/ This sentence looks somewhat unnatural.

5 = I like this sentence and it looks somewhat natural.

6 = I like this sentence, it looks natural, and it seems like something that I would say.

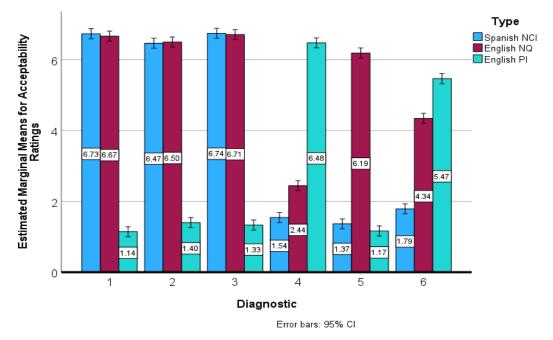
7 = This sentence looks like something I often say/ I like this sentence/ This sentence sounds very natural/ I often use this sentence in conversations.

After the practice block, the three groups completed the entire set of stimuli, which included the 36 target stimuli and 60 distractors. The stimuli were presented to the participants in blocks of ten to minimize the effects of fatigue in their judgments. Additionally, all experimental materials were pseudo-randomized to make sure that at least one or two distractors separated each target stimulus. The experiment lasted between 45 minutes and one hour.

For the analysis of the data, I conducted a General Linear Model (GLM) univariate analysis in IBM SPSS Statistics (version 29.0.) to explore the effects of the two independent variables on participants' acceptability ratings. The dependent variable for this model was *Acceptability Rating* containing participants' 1-7 ratings. The GLM univariate analysis also allowed for the examination of between-subjects effects, with *Diagnostic* representing the six diagnostic tests described in (30) and *Type* denoting the types of negation-related expressions used in the stimuli (i.e., Spanish NCI, English NQ, and English PI). To further explore significant main effects and interactions, I performed post-hoc pairwise comparisons using the Bonferroni correction.

## 4. RESULTS AND DISCUSSION

Figure 1 presents the results of the acceptability judgment task, illustrating participants' mean ratings for each type of negation-related expression across all six diagnostic tests. As shown in this figure, sentences containing NQs received higher acceptability ratings than their polarity counterparts across almost all six diagnostic tests, with the exception of diagnostics four and six. *Yes/no* question and *if* contexts (diagnostic 4) strongly favored the use of English PIs. Conversely, in syntactic islands (diagnostic 6), English PIs received slightly higher ratings than NQs, indicating a preference among English native speakers for PIs in these contexts.



**Figure 1.** Estimated Marginal Means for participants' acceptability ratings by Diagnostic and Type.

Figure 1 also shows that in the first three diagnostic tests—namely, isolation (i.e., fragment answers), modification by adverbs such as "almost" and "absolutely," and preverbal position— Spanish NCIs received high acceptability ratings, aligning with English NQs. However, they received lower ratings in the remaining three diagnostic tests: *yes/no* questions and *if* contexts, postverbal position without a negative licensor, and syntactic islands. Interestingly, Spanish NCIs patterned with English PIs only in diagnostic 5, where a licensor was required in postverbal position, but behaved dissimilarly in the other five diagnostic tests.

The GLM analysis revealed a significant main effect for *Diagnostic* on acceptability ratings (F(5, 1602) = 409.590, p < .001), suggesting that the diagnostic tests influenced participants' ratings differently. There was also a significant main effect for *Type* on ratings (F(2, 1602) = 2010.025, p < .001), indicating that the type of negation-related expression used in the stimuli had an impact on participants' ratings. Notably, the analysis revealed a significant interaction between *Diagnostic* and *Type* (F(10, 1602) = 1404.027, p < .001), which I further explore in the pairwise comparisons in Table 2.

**Table 2.** Bonferroni post-hoc comparisons of acceptability ratings across different types of negation-related expressions and diagnostic tests.

						95% Confiden	ce Interval for
			Mean D	oiff. Std.		Difference <sup>b</sup>	
Diagnostic	(I) Type	(J) Type	(I-J)	Error	Sig. <sup>b</sup>	Lower Bound	Upper Bound
1	Spanish NCI	English NQ	.067	.101	1.000	176	.309
		English PI	$5.589^{*}$	.101	<.001	5.346	5.832
2	Spanish NCI	English NQ	033	.101	1.000	276	.209
		English PI	$5.067^{*}$	.101	<.001	4.824	5.309
3	Spanish NCI	English NQ	.033	.101	1.000	209	.276
		English PI	5.411*	.101	<.001	5.168	5.654
4	Spanish NCI	English NQ	900*	.101	<.001	-1.143	657
		English PI	-4.933*	.101	<.001	-5.176	-4.691
5	Spanish NCI	English NQ	$-4.878^{*}$	.101	<.001	-5.121	-4.635
		English PI	.200	.101	.145	043	.443
6	Spanish NCI	English NQ	-2.556*	.101	<.001	-2.798	-2.313
		English PI	-3.678*	.101	<.001	-3.921	-3.435

Based on estimated marginal means

\*. The mean difference is significant at the 0.05 level.

The post-hoc analyses of the *Type* by *Diagnostic* interaction in Table 2 confirm the observations of the descriptive data in Figure 1. Spanish NCIs exhibit significant differences in behavior compared to English PIs across all diagnostic tests, except for diagnostic 5, where both Spanish NCIs and English PIs require licensing by a negative marker in postverbal position. On the other hand, Spanish NCIs only behave like English NQs in the first three diagnostic tests, displaying significant differences in the remaining three diagnostics—namely, their ability to appear in *yes/no* and *if* contexts, their grammaticality in postverbal position without a negative licensor, and their occurrence in syntactic islands. In these contexts, Spanish NCIs receive significantly lower acceptability ratings.

Furthermore, the post hoc analyses of the significant main effect for *Type* in Table 3 indicate that the acceptability ratings of Spanish NCIs significantly differ from those of English NQs and PIs, respectively. This finding suggests that, overall, Spanish NCIs behave significantly differently than their English counterparts.

**Table 3.** Bonferroni post-hoc comparisons of acceptability ratings by type of negation-related expression.

				95% Confidence Interval	
		Mean	Diff. Std.	Lower	Upper
(I) Type	(J) Type	(I-J)	Error Sig.	Bound	Bound
Spanish NCI	English NQ	-1.37*	.042 <.001	-1.47	-1.27
	English PI	$1.28^{*}$	.042 <.001	1.18	1.38

Based on observed means.

The error term is Mean Square(Error) = .470.

\*. The mean difference is significant at the 0.05 level.

Overall, the findings in this study provide experimental confirmation of Vallduvi's (1994) descriptive findings for the first four diagnostic tests. Nonetheless, the inclusion of two additional diagnostic tests brings forth nuances that allow me to shed light on the specific nature of Spanish NCIs. To facilitate further discussion, Table 4 provides a comprehensive summary of the findings from this study.

Diagnostic	1:	2:	3:	4:	5:	6:
	Fragment	Almost	Preverbal	Yes/no	Postverbal	Syntactic
	answers	modification	position	questions	position	islands
				and <i>if</i>	without	
				contexts	neg.	
					licensor	
Spanish NCIs	Yes	Yes	Yes	No	No	No
English NQs	Yes	Yes	Yes	?/*	Yes	Yes
English PIs	No	No	No	Yes	No	Yes

Table 4. Summary of experimental findings from the current study.

Recall that the goal of this study is to offer experimental evidence concerning the semantic status of Spanish NCIs. With this goal in mind, along with the comprehensive summary of the findings presented in Table 4, we can now address the first research question of the study, which sought to ascertain whether there was a difference between Spanish NCIs and English PIs.

The fact that Spanish NCIs exhibit distinct behavior compared to English PIs across nearly all diagnostic tests but one provides substantial empirical evidence to reject those hypotheses that treat NCIs as PIs (Bosque, 1980; Laka, 1990). As shown in Table 4, English PIs, unlike Spanish NCIs, cannot appear in isolation, in preverbal position or be modified by the adverb *almost*. They can, nonetheless, appear in a range of contexts where the occurrence of Spanish NCIs is deemed unacceptable by the native speakers in this study, such as non-veridical contexts (see section 2.1) and syntactic islands. This finding resonates with Zeijlstra's

(2004) criticism of approaches that treat Spanish NCIs as PIs. Furthermore, note that Bosque (1980) claimed Spanish NCIs to be licit in non-veridical context, as illustrated in examples from his work in (20). However, the acceptability ratings from the Spanish native speakers in this study contradict Bosque's claim.

These findings narrow down our options to two hypotheses: one suggesting that Spanish NCIs are inherently NQs (Zanuttini, 1991; Haegeman and Zanuttini, 1991), and the other proposing that they are non-negative indefinites requiring syntactic licensing by local negation (Zeijlstra, 2004; Tubau, 2008; Vergara and López, 2017). This leads us to the last research question, which explores whether there is a distinction between Spanish NCIs and English NQs.

In the initial three diagnostic tests, both Spanish NCIs and English NQs exhibit similar behavior. They can appear in isolation as fragment answers, can be modified by adverbs such as *almost*, and have high acceptability ratings in preverbal position. A priori, this behavior seems to suggest a shared negative status between the two, which lends support to those hypotheses that characterize NCIs as NQs. Such hypotheses can straightforwardly account for these three contexts without the need for extra machinery.

However, NCIs do not behave like NQs in diagnostics 5 and 6: while NCIs are sharply unacceptable in these contexts, NQs receive high acceptability ratings. In other words, the negative import of NQs allows them to appear in postverbal position and syntactic islands because they don't depend on external licensing sources. Participants' judgments in this study show that this is not the case for Spanish NCIs, and suggest that, at least regarding their negative import, these expressions are best characterized as non-negative.

Furthermore, although both Spanish NCIs and English NQs received relatively low acceptability ratings when they occurred in *yes/no* questions and *if* contexts (diagnostic 4), NCIs still received significantly lower ratings compared to their English counterparts. A potential explanation for English native speakers' lower ratings in these contexts might not be due to NQs being illicit in such contexts, but rather because they are invariably interpreted as negative. This inherent negativity may render their interpretation more marked and consequently native speakers opt for the use of PIs, which tend to yield more unmarked existential interpretations in these contexts.

This still leaves open the issue of Spanish NCIs showing quantifier-like behavior by allowing modification by adverbs like *almost* or *absolutely*. However, Martín-González (2002) claims that the fact that NCIs can be modified by such adverbs does not necessarily provide evidence for their quantifier status. Consider the Spanish sentence in (33)

(33)	Absolutamente	nadie	pudo	ver	absolutamente nada				
	absolutely	N-BODY	could	see	absolutely	N-THING			
	'Absolutely nobody could see absolutely anything.'								

As shown in (33), the NCIs *nadie* and *nada* have both been modified by the adverb *absolutely*. Martín-González (2002) argues that if the *almost/absolutely* diagnostic test were to imply that NCIs are quantifiers, none of the NCIs in (33) should be interpreted as existentials like the English *anything*, contrary to fact.

Martín-González (2002) further discusses Blaszczak's (1998) observation that modification by *almost/absolutely* is not exclusive to universal quantifiers but extends to

various expressions that are not quantificational but constitute endpoints on a scale, as illustrated by the Spanish example in (34).

(34) El bebé está casi dormido the baby is almost asleep'The baby is almost asleep.'

Based on this evidence, it reasonable to assume that Spanish NCIs are indefinites, and as such, endpoints on a scale with universal quantifiers on the other end. Consequently. I argue that the findings of the current study provide enough empirical evidence to refute those hypotheses that characterize NCIs as NQs (Zanuttini, 1991; Haegeman and Zanuttini, 1991) in favor of those hypotheses that characterize them as non-negative indefinites requiring syntactic licensing by local negation. Particularly, those approaches where the treatment of preverbal NCIs is motivated through phonological deletion of a negative feature that occupies the PoIP projection alongside the NCI (Tubau, 2008; Vergara and López, 2017), are favored over those relying on abstract negative operators as in (Zeijlstra, 2004).

## 5. CONCLUSION

In conclusion, this study investigated the semantic status of Spanish NCIs by conducting acceptability judgment tasks among native speakers of Spanish and English across different linguistic contexts. The findings reveal that Spanish NCIs behave differently from both English NQs and PIs and provides experimental evidence in favor of those analyses that treat these expressions as non-negative indefinites who are dependent on syntactic licensing by anti-veridical operators (i.e., negation, adversative predicates, and without PPs) (Zeijlstra, 2004; Tubau, 2008; Vergara and López, 2017). Under this view, Spanish NCIs are truly prototypical NPIs because they are only licensed in negative contexts through a syntactic dependency mediated by the operation of Agree.

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# Appendix 1. Target stimuli English stimuli (Negative Quantifiers)

- (1) What did John say? Nothing
- (2) What did your friend buy at the store? Nothing
- (3) Who did Peter see at the concert? Nobody
- (4) Who passed the test? Nobody

- (5) How often do you make dinner? Never
- (6) How often do you call your therapist? Never
- (7) What did John say? Almost nothing
- (8) What did your friend buy at the store? Almost nothing
- (9) Who did Peter see at the concert? Almost nobody
- (10) Who passed the test? Almost nobody
- (11) How often do you make dinner? Almost never
- (12) How often do you call your therapist? Almost never
- (13) Nobody runs five miles in two minutes.
- (14) Nobody cleans their house at night.
- (15) Nothing prepares you for the unexpected.
- (16) Nothing cleans the dirt in these shoes.
- (17) You never answer your calls.
- (18) Doctors never lie to their patients.
- (19) Did you see nothing?
- (20) Did Peter see nobody at the concert?
- (21) Do you never wash clothes?
- (22) If you see nothing, let me know.
- (23) If your boss fires nobody, he'll be in trouble.
- (24) If you never clean your room, call your mom.
- (25) John said nothing during class.
- (26) Your friend bought nothing at the store.
- (27) My brother ate nothing at the restaurant.
- (28) Peter saw nobody at the concert.
- (29) He called nobody yesterday.
- (30) My sister swore that she kissed nobody at the party.
- (31) The teacher didn't reprimand John when he said nothing during class.
- (32) John didn't leave the room as soon as he saw nobody there.
- (33) My brother didn't eat his lunch while he was writing letters to nobody.
- (34) The teacher didn't reprimand the student who said nothing during the class.
- (35) The police didn't call the person who saw nobody during the robbery.
- (36) The union workers didn't talk to those bosses who had fired nobody.

# English stimuli (Polarity Items)

- (1) What did John say? Anything
- (2) What did your friend buy at the store? Anything
- (3) Who did Peter see at the concert? Anybody
- (4) Who passed the test? Anybody
- (5) How often do you make dinner? Ever
- (6) How often do you call your therapist? Ever
- (7) What did John say? Almost anything
- (8) What did your friend buy at the store? Almost anything
- (9) Who did Peter see at the concert? Almost anybody
- (10) Who passed the test? Almost anybody

- (11) How often do you make dinner? Almost ever
- (12) How often do you call your therapist? Almost ever
- (13) Anybody runs five miles in two minutes.
- (14) Anybody cleans their house at night.
- (15) Anything prepares you for the unexpected.
- (16) Anything cleans the dirt in these shoes.
- (17) You ever answer your calls.
- (18) Doctors ever lie to their patients.
- (19) Did you see anything?
- (20) Did Peter see anybody at the concert?
- (21) Do you ever wash clothes?
- (22) If you see anything, let me know.
- (23) If your boss fires anyone, he'll be in trouble.
- (24) If you ever clean your room, call your mom.
- (25) John said anything during class.
- (26) Your friend bought anything at the store.
- (27) My brother ate anything at the restaurant.
- (28) Peter saw anybody at the concert.
- (29) He called anybody yesterday.
- (30) My sister swore that she kissed anybody at the party.
- (31) The teacher didn't reprimand John when he said anything during class.
- (32) John didn't leave the room as soon as he saw anyone there.
- (33) My brother didn't eat his lunch while he was writing letters to anyone.
- (34) The teacher didn't reprimand the student who said anything during the class.
- (35) The police didn't call the person who saw anybody during the robbery.
- (36) The union workers didn't talk to those bosses who had fired anybody.

## Spanish stimuli (Negative Concord Items)

- (1) ¿Qué dijo Juan? Nada
- (2) ¿Qué compró tu amigo en la tienda? Nada
- (3) ¿A quién vio Pedro en el concierto? A nadie
- (4) ¿Quién aprobó el examen? Nadie
- (5) ¿Con qué frecuencia haces la cena? Nunca
- (6) ¿Con qué frecuencia llamas a tu terapeuta? Nunca
- (7) ¿Qué dijo Juan? Casi nada
- (8) ¿Qué compró tu amigo en la tienda? Casi nada
- (9) ¿A quién vio Pedro en el concierto? A casi nadie
- (10) ¿Quién aprobó el examen? Casi nadie
- (11) ¿Con qué frecuencia haces la cena? Casi nunca
- (12) ¿Con qué frecuencia llamas a tu terapeuta? Casi nunca
- (13) Nadie corre 5 kilómetros en dos minutos.
- (14) Nadie limpia su casa por la noche.
- (15) Nada te prepara para lo inesperado.
- (16) Nada limpia la suciedad de estos zapatos.

- (17) Nunca contestas tus llamadas.
- (18) Los doctores nunca mienten a sus pacientes.
- (19) ¿Has visto nada?
- (20) ¿Vio Pedro a nadie en el concierto?
- (21) ¿Limpias nunca ropa?
- (22) Si ves nada, avísame.
- (23) Si tu jefe despide a nadie, tendrá problemas.
- (24) Si limpias nunca tu habitación, llama a tu madre.
- (25) Juan dijo nada durante la clase.
- (26) Tu amigo compro nada en la tienda.
- (27) Mi hermano comió nada en el restaurante.
- (28) Pedro vio a nadie en el concierto.
- (29) Él llamó a nadie ayer.
- (30) Mi hermana juró que beso a nadie en la fiesta.
- (31) El profesor no regañó a Juan cuando dijo nada durante la clase.
- (32) Juan no se fue de la habitación tan pronto como viera a nadie allí.
- (33) Mi hermano no comió su almuerzo mientras escribía cartas a nadie.
- (34) El profesor no regañó al estudiante que dijo nada durante la clase.
- (35) El policía no llamó a la persona que había visto a nadie durante el atraco.
- (36) Los sindicalistas no hablaron con aquellos jefes que habían despedido a nadie.

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