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## Polarity in Spanish, French, and English

# Polarity in Spanish, French, and English<sup>1</sup>

Dee Cain and Renée J. O'Brien<sup>2</sup>

## 1. Introduction

Spanish, French, and English all contain Negative Polarity Items (NPIs), words that must be licensed by a co-occurring negative element, with the NPI in a downward-entailing environment. This paper briefly reviews prior syntactic accounts of NPIs, along with a major assumption on which they are based. We then offer a revised analysis using the Distributed Morphology model of Halle and Marantz (1993, 1994). The analysis presented here, in contrast to earlier accounts, unifies the explanation of polarity in matrix declaratives in these three languages.

## 2. Data and Prior Approaches

Examples of NPIs in matrix declaratives and their required licensers appear in (1) through (3):

- (1) Spanish (a) *No* amo a *nadie*.  
(b) \*Amo a *nadie*.
- (2) French (a) Je *n'aime* *personne*.  
(b) \*J'aime *personne*.
- (3) English (a) I *don't* love *anybody*.  
(b) \*I love *anybody*.

In the first example of each pair, the first italicized element licenses the NPI in object position. The absence of the licenser results in ungrammaticality. In Spanish, for instance, *no* licenses the appear-

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<sup>2</sup>Names appear in alphabetical order.

ance of *nadie* in object position in (1a); the absence of *no* results in ungrammaticality, as seen in (1b).

Although the three languages exhibit the same behavior with respect to these elements in object position, they differ as to whether the same elements can appear in subject position. They also differ as to whether the words that do appear must co-occur with an overt negative marker:

- (4) Spanish (a) *Nadie* trabaja.  
(b) \**Nadie no* trabaja.
- (5) French (a) \**Personne* travaille.  
(b) *Personne ne* travaille.
- (6) English (a) \**Anybody* works.  
(b) \**Anybody* doesn't work.  
(c) *Nobody* works.

In Spanish, use of the negative clitic *no* is ungrammatical when *nadie* appears in subject position, while in French, the presence of *ne* is obligatory. English differs from either of these languages: while the presence of the clitic *n't* is ungrammatical (as in Spanish), the polarity word used in object position (*anybody*) cannot be used in subject position and receive a negative interpretation, as is seen in (6a). Instead, a different word is needed, i.e., *nobody* in (6c).

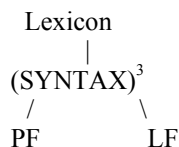
In addressing these differences, some researchers have posited that languages are actually of two types: Negative Concord languages and Negative Polarity languages. For example, Spanish is often considered a Negative Concord language, since as in (1a) two overt negative elements are obligatory. Standard English, however, is considered a Negative Polarity language because of data such as the *anybody/nobody* distinction in (3) and (6). Interestingly, the non-standard dialect of English that uses *nobody* rather than *anybody* in object position (*I don't love nobody*) is also an example of Negative Concord. This concord/polarity distinction boils down to the relative degree of overt negative morphological marking in a particular language, and the structural positions in which differing words may appear.

Analyses in the Principles & Parameters framework (Chomsky 1981, 1986) were unable to account for the range of facts in (1) through (6). Proposed solutions include positing two different kinds of what Longobardi (1986) calls "n-words"; i.e., in Spanish,

the *nadie* that appears in object position is different from the *nadie* that appears in subject position. In contrast, Laka (1994) posits that it is the same *nadie* that appears in the two different positions, but this account does not capture the *anybody/nobody* alternation in standard English. Another approach adds to the inventory of functional projections to account for polarity. For instance, Zanuttini (1995) proposes further functional architecture, the *polarity phrase* or PolP, in addition to the projection NegP used in other accounts.

All of these analyses share the assumption that the lexicon, which includes all semantic, categorial, and theta-role information as well as phonological underlying representations, is situated pre-syntactically:

(7) Principles & Parameters Model



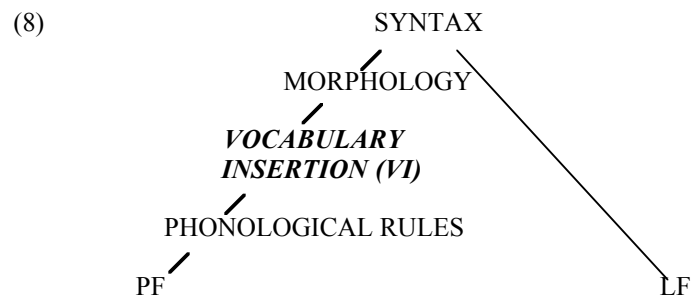
Under this view, lexemes and morphemes are base-generated into the terminal nodes of the phrase structure. Syntactic operations move or merge items, and the morphology visible at PF directly reflects the derivational processes involved. Instead of adhering to this view of the lexicon, we adopt a strictly featural approach, as outlined in the following section.

### 3. Distributed Morphology and Polarity

Rather than assuming the presyntactic lexicon of earlier accounts, we assume that the phonological content of vocabulary items is not a part of the phrase structure. The Distributed Morphology (DM) model of Halle & Marantz (1993, 1994) resituates phonological information from a pre-syntactic to a post-spell-out position:

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<sup>3</sup>The number of levels operant in the syntax is not a consideration in this analysis.



This restructuring changes what appears in the terminal nodes of the phrase structure. Instead of actual lexemes and morphemes appearing in the tree, only syntactic, semantic, and morphological *features* occupy terminal nodes. Phonological features are not supplied until after all syntactic and morphological operations, at the level of Vocabulary Insertion (VI). The Vocabulary Item, therefore, is as seen in (9):

(9) The Vocabulary Item

semantic features			
syntactic features		↔	phonological features
morphological features			

For example, the English subject pronoun *I* appears in [Spec, IP] as the feature bundle in (10). VI, plus the operation of any applicable phonological rules, would result in the bundle's surfacing as the diphthong /aI/ at PF:

(10)

<u>Feature bundle</u>		<u>VI</u>		<u>PF</u>
+HUM				
+1P	⇒	/aI/	⇒	[aI]
+SG				
+NOM				

We extend this featural analysis to the polarity items in (1) through (6). In the phrase structure by spell-out ( $\Sigma$ ), only feature bundles occupy the terminal nodes where items such as *anybody* and *nobody* are inserted at VI.

Such a featural approach carries with it the responsibility to flesh out the entire set of features in terminal nodes, as well as any interdependencies these features may have. Feature interdependency is common in phonology, where, for example, the manner feature [+/-distributed] is dependent upon the place feature [+coronal]. These types of interfeatural relations will be shown with embedded brackets, e.g., [+cor [+/-dist]].

Regarding feature interdependencies in the phrase structure, we propose that the feature for polarity is dependent on the feature for indefiniteness. Note how indefinites alternate in polarity (e.g., *a woman/no woman*, or *something/nothing*) while definites do not (*the woman*).

In addition to this interdependency between polarity and indefiniteness, we further posit that polarity items have a feature bundle that is *underspecified* for polarity. Therefore, these items, which in prior accounts have been referred to as *Negative Polarity Items*, will henceforth be considered *Indefinite Polarity Items*, or IPIs. For example, the feature bundle of a human IPI is shown in (11), where the underspecified feature [POL X] is dependent upon the indefinite value within which it is embedded:

(11) [+HUM; [-DEF [POL X]]]

This characterization of IPI feature bundles allows for a broader classification of items such as *anybody/nobody/somebody* than was previously possible. We propose that all three of these items are base-generated with the bundle in (11). Differing surface forms depend on the polarity value that the bundles acquire in the syntax.

This polarity value is acquired by an IPI based on the features in PolP (Zanuttini 1995), as shown in (12) for Spanish. Where the gap is filled in with [+NEG], the feature bundle surfaces as *nadie*. If the gap is filled in by the feature [+POS], however, the surface form is *alguien*:

(12) [+HUM; [-DEF [+ NEG]]] ⇒ *nadie*  
 [+HUM; [-DEF [+ POS]]] ⇒ *alguien*

For each of the languages under analysis here (including both the standard and non-standard dialects of English), the presence of negative features in PolP results in the surface forms shown in (13):

- (13) [+HUM; [-DEF [+NEG]]] ⇒ *nadie*  
*personne*  
*anybody/*  
*nobody* (standard)  
*nobody* (non-std.)
- [-HUM; [-DEF [+NEG]]] ⇒ *nada*  
*rien*  
*anything/*  
*nothing* (standard)  
*nothing* (non-std.)

Conversely, the presence of positive features in PolP results in the surface forms you see in (14):

- (14) [+HUM; [-DEF [+POS]]] ⇒ *alguien*  
*quelqu'un*  
*somebody*
- [-HUM; [-DEF [+POS]]] ⇒ *algo*  
*quelque chose*  
*something*

The following section demonstrates how this analysis accounts for the data in (1) through (6) and outlines several of its advantages.

## 4. Analysis

The analysis that follows first addresses object IPIs in Spanish, French, and English. The second part considers subject IPIs.

### 4.1. Object IPIs

The structure in (15) represents the sentences containing object IPIs in (1) through (3). As discussed above, this system assumes that the phrase structure by  $\Sigma$  contains only bundles of features, which are not realized phonetically until PF. The tree in (15) shows how the relevant feature bundles are base-generated. The VI/PF realization of the feature bundles by  $\Sigma$  is shown with double arrows to the left of the terminal nodes.





As (15) shows, the underlying structure of sentences (1) through (3) is identical for Spanish, French and English. The only difference by  $\Sigma$  relates to the relative strength of the inflectional features. Both French and Spanish have strong verbal inflection, so the feature bundle in  $V^0$  raises to  $I^0$  by  $\Sigma$ . In English, however, because verbal inflection is weak, the bundle in  $V^0$  does not raise until LF (Pollock 1989).

Since no phonological features are present in the syntax, the semantic features for the verb *love* are indicated with capital letters ('LOVE'). In French and Spanish, the bundle in  $I^0$  is mapped at VI to the phonological content *aime* and *amo*, respectively. For English, the inflectional features are phonetically realized through the insertion of *do* at  $I^0$ , and the bundle left in  $V^0$  by  $\Sigma$  is mapped to the phonological content appearing to the left of the terminal node (*love*).

$Pol^0$  contains the feature [+NEG], as seen in (15). This same feature licenses the IPI in object position. It does so by defining a *negative polarity domain* ([+NEG] domain) that, at least for matrix declaratives, extends to all of the lower phrase structure. Any feature bundles underspecified for polarity *within* the domain assume the value of the domain. Therefore, the bundle for the object IPI in all three languages is [+HUM; [-DEF [+NEG]]], and at VI, it surfaces according to the specific morphological and phonological requirements of the particular language.

In French and Spanish, the [+NEG] feature in  $Pol^0$  raises to  $I^0$  with the verb, establishing the [+NEG] domain at that level. The presence of the feature is phonetically realized through VI as the preverbal clitic *ne* in French and *no* in Spanish. Because verb movement does not occur until LF in English, the [+NEG] domain is defined at  $Pol^0$ . The [+NEG] feature in  $Pol^0$  is realized through VI as the clitic *n't*.

Note also that the object IPI acquires a structural feature for CASE from the verb, [+ACC]. The resulting amalgam leads to the VI/PF realization *a nadie/personne/anybody*. One observation peculiar to Spanish is that it overtly realizes the feature [+HUM] on the object IPI (i.e., *a nadie*). This 'personal' *a* occurs only when [+HUM] is a part of the feature bundle in object position, or stated differently, when the bundle includes [+ACC]. This personal *a* does not appear when a [+HUM, +NOM] IPI occurs, that is, when the IPI is in subject position:

- (16) No amo a *nadie*. 'I don't love anybody.'  
 \_\_\_*Nadie* duerme. 'Nobody sleeps.'

This difference in the surface form of a [+NEG] IPI bundle within a language is also observed in English, where a [+NEG] IPI surfaces as *nobody* or *nothing* in subject position, but appears as *anybody* or *anything* in object position. In both languages, the structural case features [+NOM] and [+ACC] interact with the base-generated bundle of the IPI. For example, the feature bundle for a [+NEG] subject IPI moves to [Spec, IP] by  $\Sigma$  in order to get case. Because that IPI bundle has become the uppermost element in a [+NEG] domain, the [+NEG] feature it carries must be overtly realized. Thus, in English a [+HUM; [-DEF [+NEG]]] IPI in subject position surfaces as *nobody* rather than *anybody*.

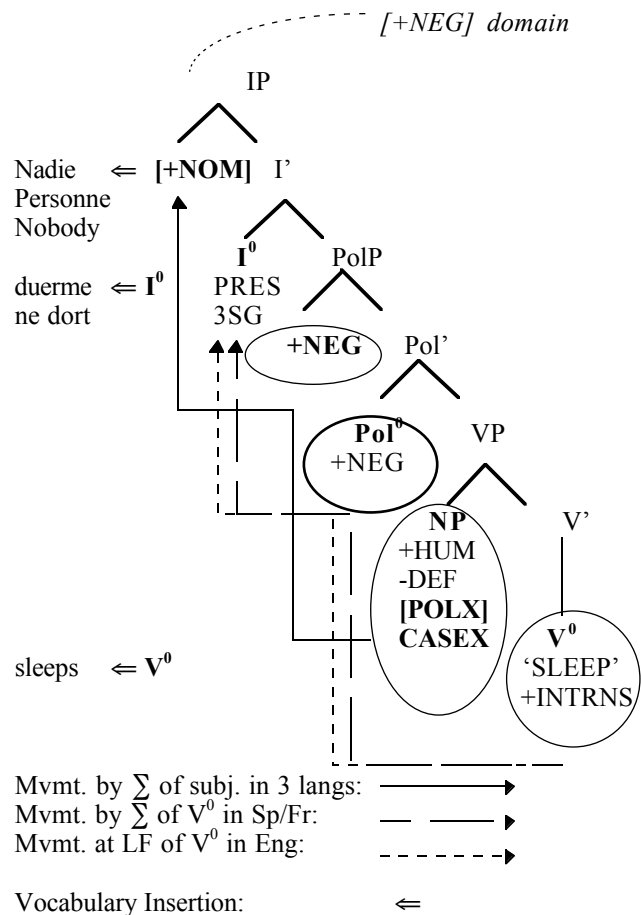
This analysis of object IPIs predicts that the [+NEG] feature will be manifested upon any IPIs in a downward-entailing environment. In other words, all IPIs within a given polarity domain will surface with the same value. This prediction is borne out by evidence in all three languages, and is best illustrated in (19a), which shows that this domain may extend indefinitely:

- (17) Spanish (a) No doy nada a nadie.  
 (b) \*No doy algo a nadie/nada a alguien.
- (18) French (a) Je ne donne rien à personne.  
 (b) \*Je ne donne *quelque chose* à personne/  
*rien* à quelqu'un.
- (19) English (a) I don't give anything to anybody (at any  
 time for any reason...)  
 (b) \*I don't give *something* to anybody/  
*anything* to nobody.

#### 4.2. Subject IPIs

The analysis for IPIs in subject position (examples (4) through (6) above) follows directly from the previous analysis of objects:

(20) Phrase Structure/Vocabulary Insertion of IPIs in Subject Position



[Spec, VP] contains the same feature bundle for the indefinites that appeared in object position in (15), except for the [+ACC] specification. Because this bundle lacks a feature for case (represented in (20) as the underspecified feature [CASE X]), it then moves through [Spec, PolP] to [Spec, IP] to receive [+NOM]. In doing so, the bundle picks up the [+NEG] feature in [Spec, PolP] and carries it to [Spec, IP]. The [+NEG] domain in this construc-

tion, therefore, is at the level of the IP. Again, in Spanish and French, the verb moves prior to LF through  $\text{Pol}^0$  to  $\text{I}^0$ . In French, the feature [+NEG] is phonetically realized as the clitic *ne*, whereas in Spanish, the feature remains phonetically null. In English, the verb does not raise until LF, and the [+NEG] feature in  $\text{Pol}^0$  is also phonetically null. This variation is unremarkable; it is simply a language-particular difference as to which features map to phonological content at VI. The surface forms that features take is a morphological, rather than a syntactic, consideration.

Evidence that the [+NEG] domain in (20) comprises the entire matrix clause is provided by sentences such as (21), in which any IPIs in downward entailing environments are consistently, and exclusively, [+NEG]:

(21) Nobody loves *anybody* at any time for any reason.

## 5. Conclusion

This analysis of IPIs has several distinct advantages over prior approaches. First, it provides a unified explanation of three languages that taken together had proven problematic. Crucially, those approaches relied on the assumption that morphological surface forms directly reflect syntactic processes. This assumption required extra machinery in order to explain the data.

For example, one account explained the Spanish *nadie*, which appears in both subject and object positions, as two distinct lexical items. Thus, words that are identical on the surface were deemed underlyingly different, one an NPI and the other a universal negative quantifier. Making such a distinction is not necessary under our approach; the two are overt manifestations of identical base-generated feature bundles.

Second, adoption of the DM model allows for a simplified phrase structure in that fewer functional categories are needed. The insight of Zanuttini's original PolP analysis is coupled with an abstract featural analysis that obviates the need for NegP to account for polarity facts.

Finally, divorcing morphology from syntax renders epiphenomenal the distinction between Negative Concord languages and Negative Polarity languages. Instead, the differences between the two types are morphological rather than syntactic.

Once again, working in this model requires more precisely defined pre-VI feature bundles, as well as a detailed account of how

these features interact with each other and interact within the phrase structure. We do not claim that the full range of polarity facts can be subsumed under this first pass at a feature-based account. However, we predict that extension of this analysis to other types of polarity constructions, such as adversatives and certain adverbials, will follow with a minimum of additional machinery. We further believe that other closed-class items will be found to adapt fruitfully and easily to this framework, thus simplifying and rendering more flexible the computations involved in the syntactic component of the language module.

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