

EXAMINING HEADEDNESS IN NATIVE AND NON-NATIVE GRAMMARS

**Insights from compounding in L1 and
L2 Brazilian Portuguese**

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AIM

To compare L1 and L2 speakers' interpretation of headedness in Noun-Noun (NN) compounds, specifically with respect to the attachment of the diminutive **-inho** in Brazilian Portuguese.



cão polícia
'police dog'



cãozinho polícia
'little police dog'



NN COMPOUNDS

Inflectional morphology

NN COMPOUNDS

- This study focuses specifically on attributive or subordinate NN compounds
- **attributive/subordinate**: the head N is modified or complemented by the other N

cartão-jovem
card young
'youth card'

palavra-chave
word key
'key word'

HEADNESS IN COMPOUNDING

- It has been posited that Portuguese is left-headed (Rio-Torto & Ribeiro 2012), similar to other Romance languages such as Spanish
- This is evident in the attachment of inflectional morphology such as plural -s
 - the plural affix is only grammatical when attached to the head

(1) cart**ões**-jovem

cards young

‘youth cards’

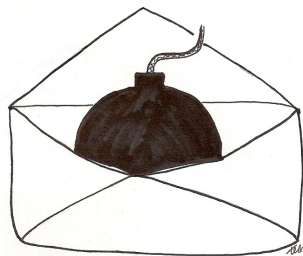
(2) *cartão-jove**ns**

card youngs

*‘youths card’

HEADNESS IN COMPOUNDING

- On the other hand, languages such as English are right-headed, a contrast which can be illustrated both
- through inflectional morphology:



carta bomba
carta**s** bomba
*carta bombas**s**

letter bomb
*letter**s** bomb
letter bomb**s**

- and in the interpretation of NN compounds in Portuguese and English:

A 'carta bomba' is a type of **letter** but...
A 'letter bomb' is a type of **bomb**



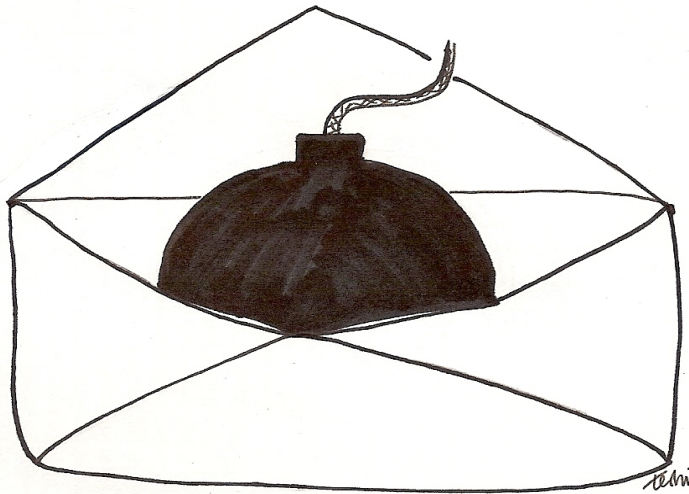
NN COMPOUNDS

Derivational morphology

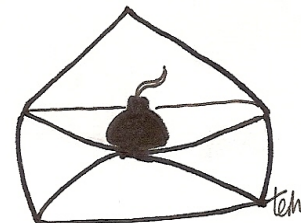
DIMINUTIVES IN NN COMPOUNDING

- Unlike inflectional morphology, the grammaticality and interpretation of derivational affixes such as the diminutive as **-inho** ('little') is unclear

carta bomba



cartinha bomba



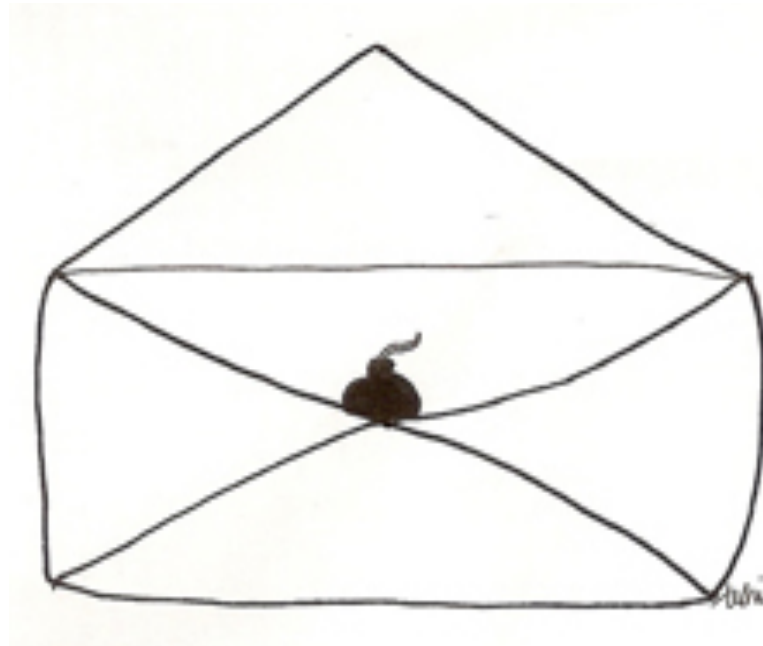
DIMINUTIVES IN NN COMPOUNDING

cartinha bomba?



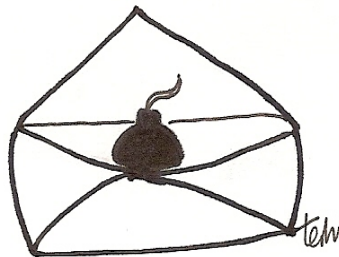
DIMINUTIVES IN NN COMPOUNDING

carta bombinha?



DIMINUTIVES IN NN COMPOUNDING

cartinha bombinha?



DIMINUTIVES IN NN COMPOUNDING

- To the best of our knowledge, no one has addressed derivational morphology in NN compounds in Portuguese
- Given that both Portuguese and Spanish are left-headed, we would argue that it is relevant to discuss the proposals put forward for derivational morphology in Spanish compounds

DERIVATION = ? \neq INFLECTION

casita cuna

little house crib / 'little crib house'

*casa cunita

Zwicky (1988)

BUT...

- Scope selection

casita cuna

casa cunita

Cinque (2005)



PREVIOUS BILINGUAL RESEARCH

NN compounds

DERIVATIONAL MORPHOLOGY

To the best of our knowledge, only two previous studies have examined derivational morphology in Spanish NN compounds (Liceras & Klassen 2016 & 2017).

In an acceptability judgment task, 27 L1 English-L2 Spanish and 66 L1 Spanish adults rated the attachment of inflectional and derivational affixes in NN compounds.

The L1 and L2 speakers patterned together in their ratings:

preference	NN + inflection	NN + derivation
#1	-s on the head	-ito on the head
#2	-s on both Ns	-ito on the modifier
#3	-s on the modifier	-ito on both Ns

DERIVATIONAL MORPHOLOGY

In an interpretation study, 60 L1 English-L2 Spanish and 51 L1 Spanish adults were asked to select the picture that best represented the written compound in which the attachment of *-ito* was manipulated:

hombrecito lobo

man-little wolf



hombre lobito

man wolf-little



hombrecito lobito

man-little wolf-little



DERIVATIONAL MORPHOLOGY

L1 Spanish speakers assigned a privileged status to head, allowing **-ito** to have scope over the whole compound only when attached to the head:

hombrecito lobo

- *-ito* on the head N
affects both the man
and wolf parts



hombre lobito

- *-ito* on the modifier N
only affects the
modifier (wolf part)



DERIVATIONAL MORPHOLOGY

In contrast, L2 Spanish speakers individualized the attachment of **-ito**:

hombrecito lobo

- *-ito* on the head N
only affects the head
(man part)



hombre lobito

- *-ito* on the modifier N
only affects the
modifier (wolf part)



L2 speakers pattern with L1 speakers in their acceptability ratings
BUT they diverge from the L1 speakers in the interpretation of
derivational morphology in NN Spanish compounds.



PRESENT STUDY

Derivation
in Brazilian Portuguese NN compounds

RESEARCH QUESTIONS

- Do L1 and L2 Brazilian Portuguese speakers pattern with L1 and L2 Spanish speakers in their interpretation of derivational morphology in NN compounds?

hombrecito lobo / hombre lobito

homenzinho lobo / homem lobinho

‘little werewolf’

- Do L2 Brazilian Portuguese speakers’ interpretations vary according to their L1s?

PICTURE SELECTION TASK

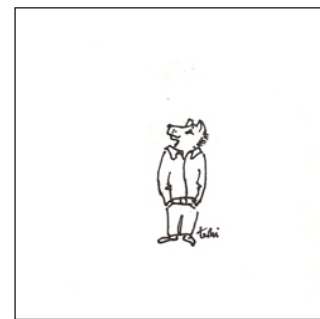
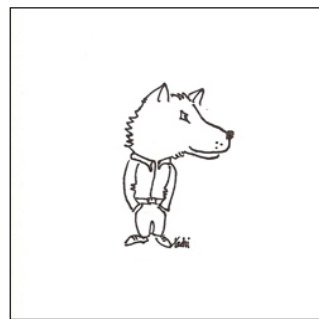
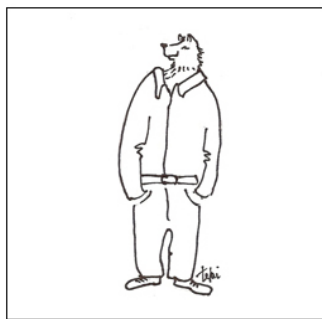
Participants

- 66 L1 Brazilian Portuguese (BP) speakers
- 47 L2 BP speakers
 - intermediate-advanced level of proficiency (M=79%, SD=15.5)
 - diverse L1s; biggest groups:
 - L1 Spanish (n=15), L1 English (n=7) & L1 French (n=7)

Task

- select the picture that best represents 16 written compounds

Homem lobinho

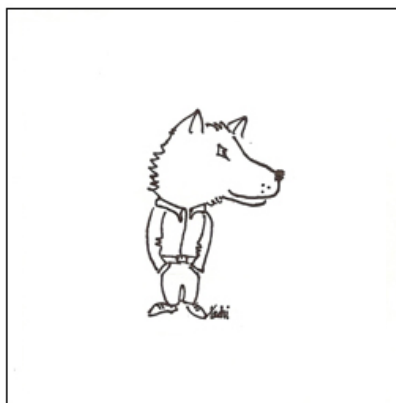


DATA CODING

Picture classification:



base



small head



small modifier



small base

Types of NN compounds:

- **NN** bare Ns
- **DN** diminutive affix on the head
- **ND** diminutive affix on the modifier
- **DD** diminutive affix on both Ns

homem lobo

*homen**zinho** lobo*

*homem lob**inho***

*homen**zinho** lob**inho***

PREDICTIONS

If L1 BP speakers pattern with L1 Spanish speakers in treating derivational morphology like inflectional morphology, we expect...

DN

*homen***zinho** lobo

small base



If not...

small head



PREDICTIONS

If L1 BP speakers pattern with L1 Spanish speakers in treating derivational morphology like inflectional morphology, we expect...

ND

homem lobinho

small modifier

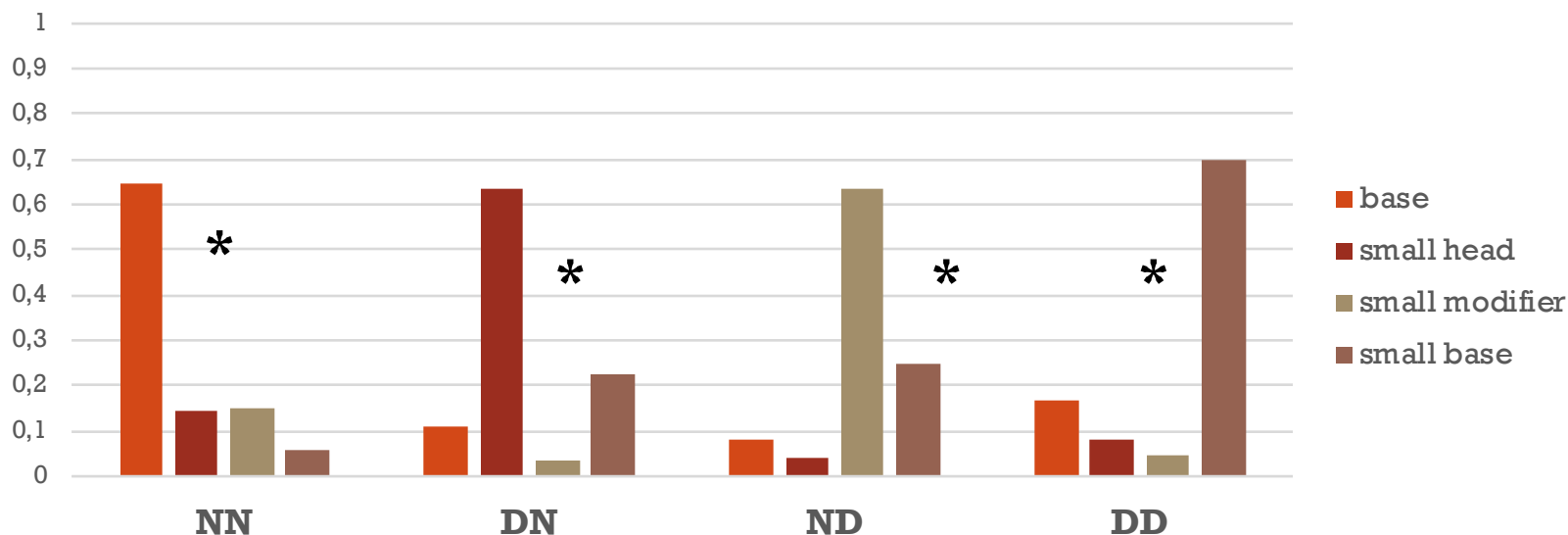


If not...

small base



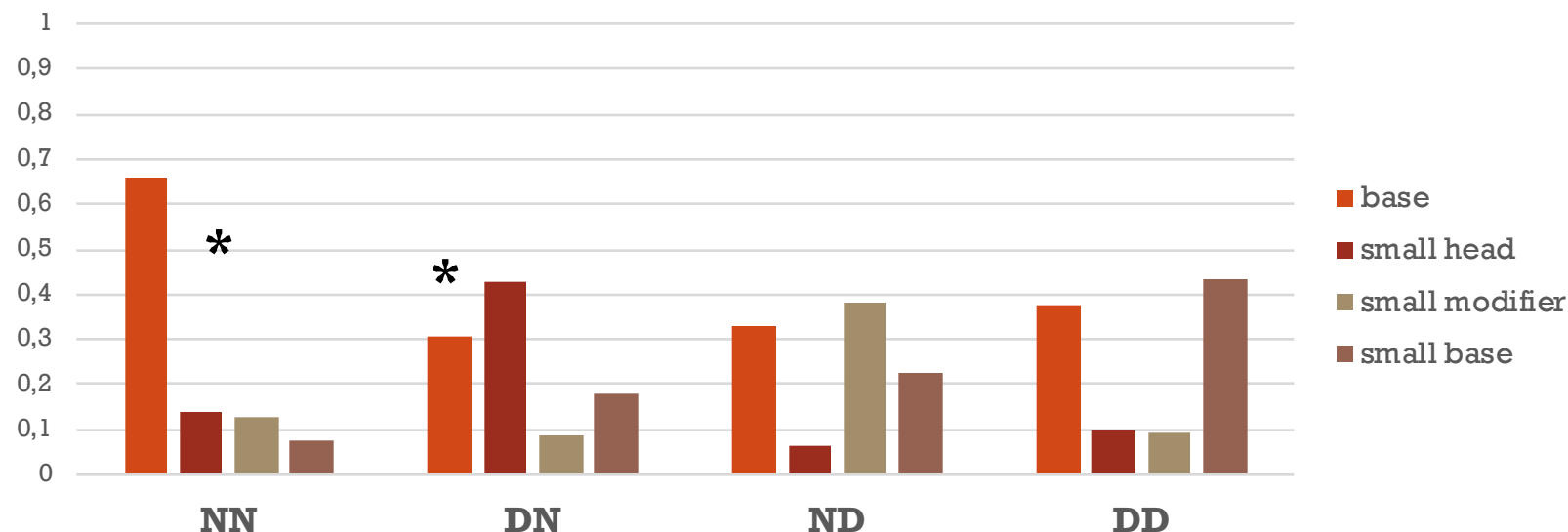
RESULTS: L1 BP



- **NN** base
- **DN** small head
- **ND** small modifier
- **DD** small base

- L1 BP speakers have quite clear picture selections
- Interestingly, they interpret the diminutive on the head as only having scope over the head itself

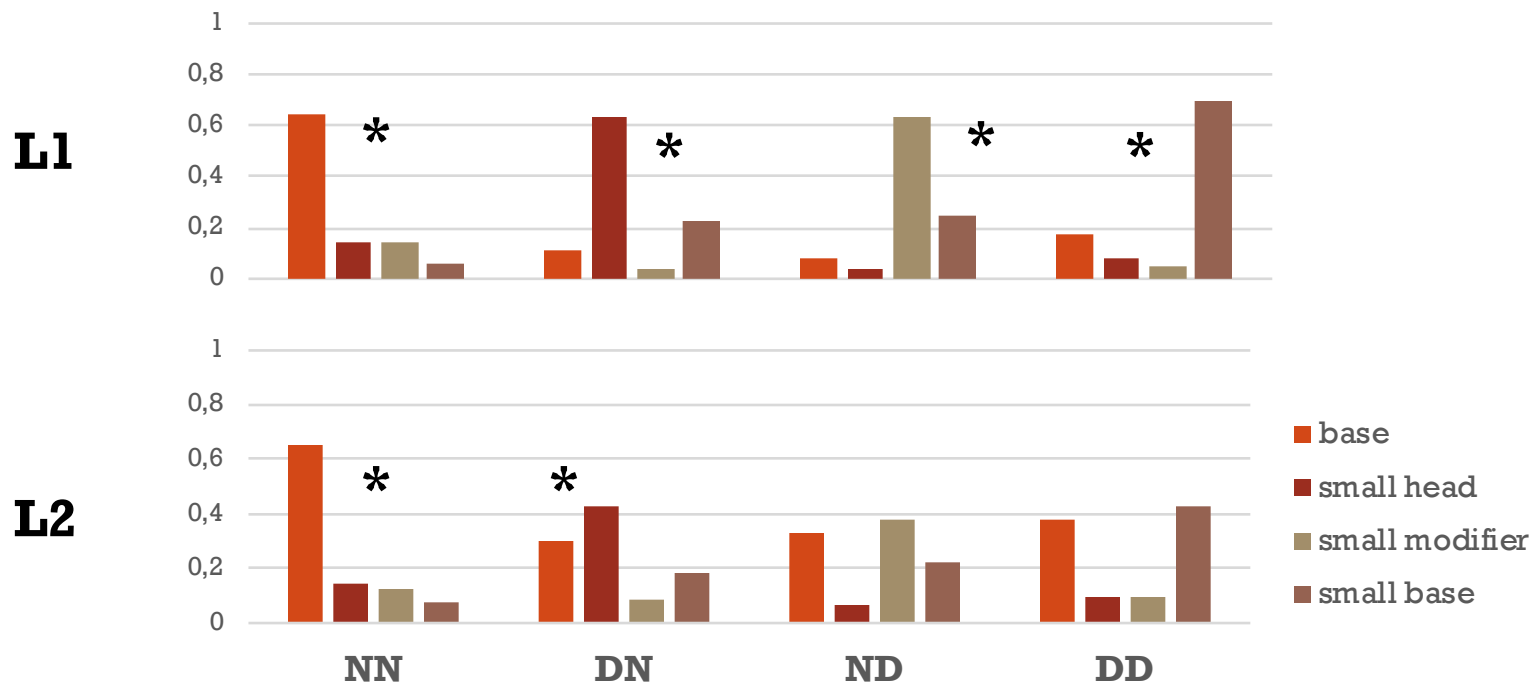
RESULTS: L2 BP



- **NN** base
- **DN** small head
- **ND** small modifier (slight trend)
- **DD** small base (slight trend)

- L2 BP speakers are much less clear in their picture selections
- The base picture (NN representation) is often selected, suggesting that the L2 speakers are unsure of the effect of the diminutive in the compound

RESULTS: L1 VS L2



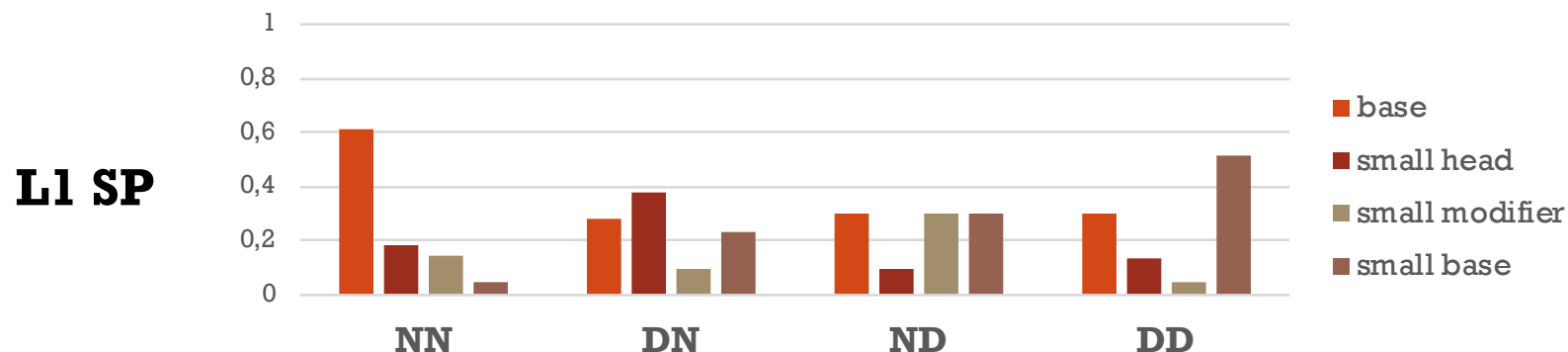
- L1 and L2 speakers generally pattern together in their interpretations
- Importantly though, the L2 speakers do not significantly select one picture over the others with either ND or DD compounds

RESULTS: DIVERSE L1S IN L2 GROUP

- In order to determine whether the picture selections in the L2 group varied by the L1 of the participants, we analysed the L2 data by each L1
- The results showed the same pattern found in the main analysis:
 - significant effects of compound ($p < .001$) and animacy ($p < .001$)
- There was no effect of L1 group ($p = .815$)
- Given the possibility that no significant difference was found by L1 group due to the low power of the analysis, the 3 largest L1 groups (English, French & Spanish) were further analysed to determine whether any additional effects could be found
- The pattern of results was again the same:
 - significant effects of compound ($p < .001$) and animacy ($p = .001$)
 - no effect of the 3 L1 groups ($p = .491$)

RESULTS: L1 SPANISH-L2 BP

- The results of the further analyses are perhaps surprising given that Spanish and BP are much more closely related than the other languages

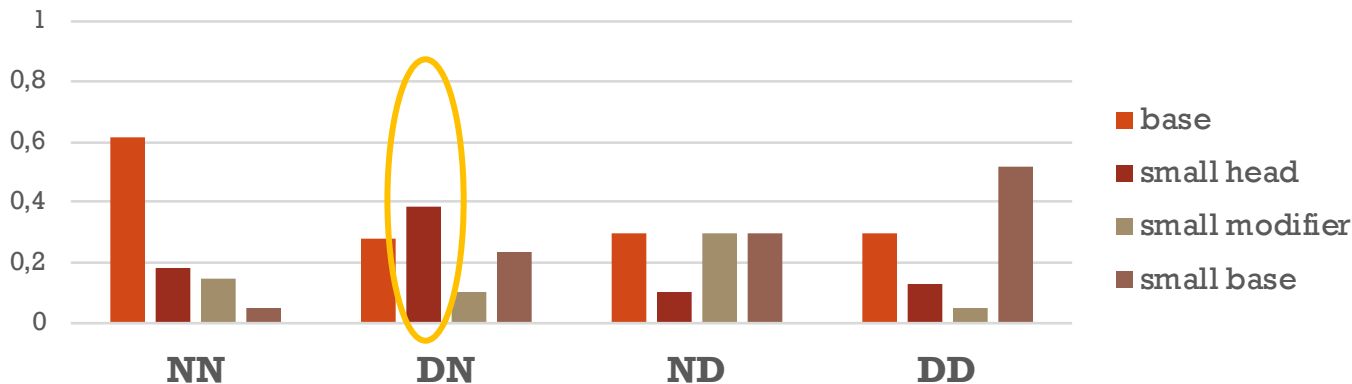


- **DN:** L1 Spanish speakers interpret the diminutive in BP as only having scope over the head
- **ND:** There is no clear interpretation of the diminutive on the modifier

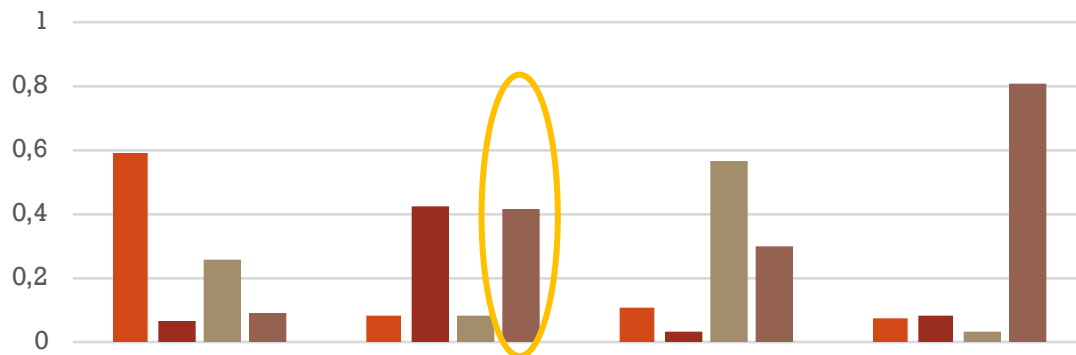
DISCUSSION: SPANISH VS BP

L1 Spanish speakers' results in NN compounds

***BP –inho
(L2)***



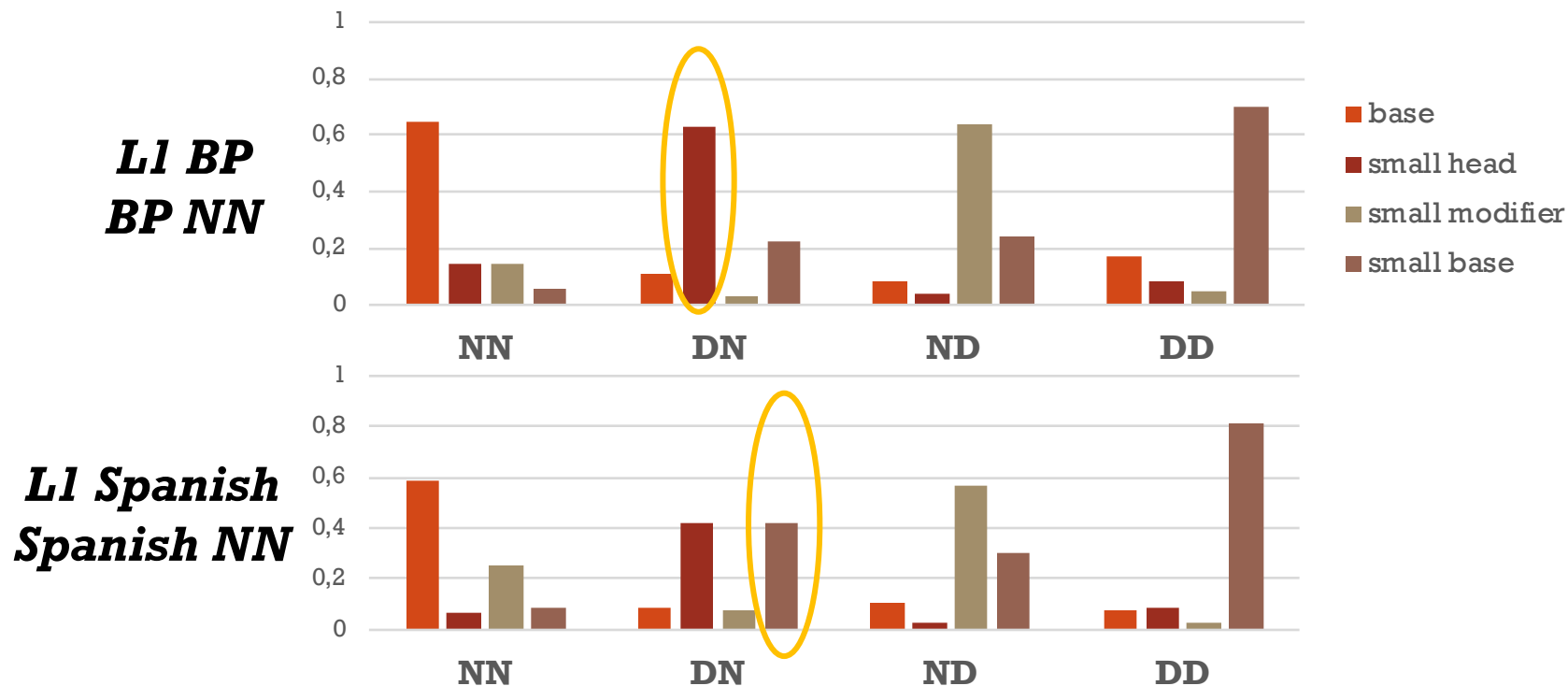
***Spanish –ito
(L1)***



- In their L1, Spanish speakers allow the diminutive on the head to have scope over the whole compound
- This interpretation is not transferred into L2 BP

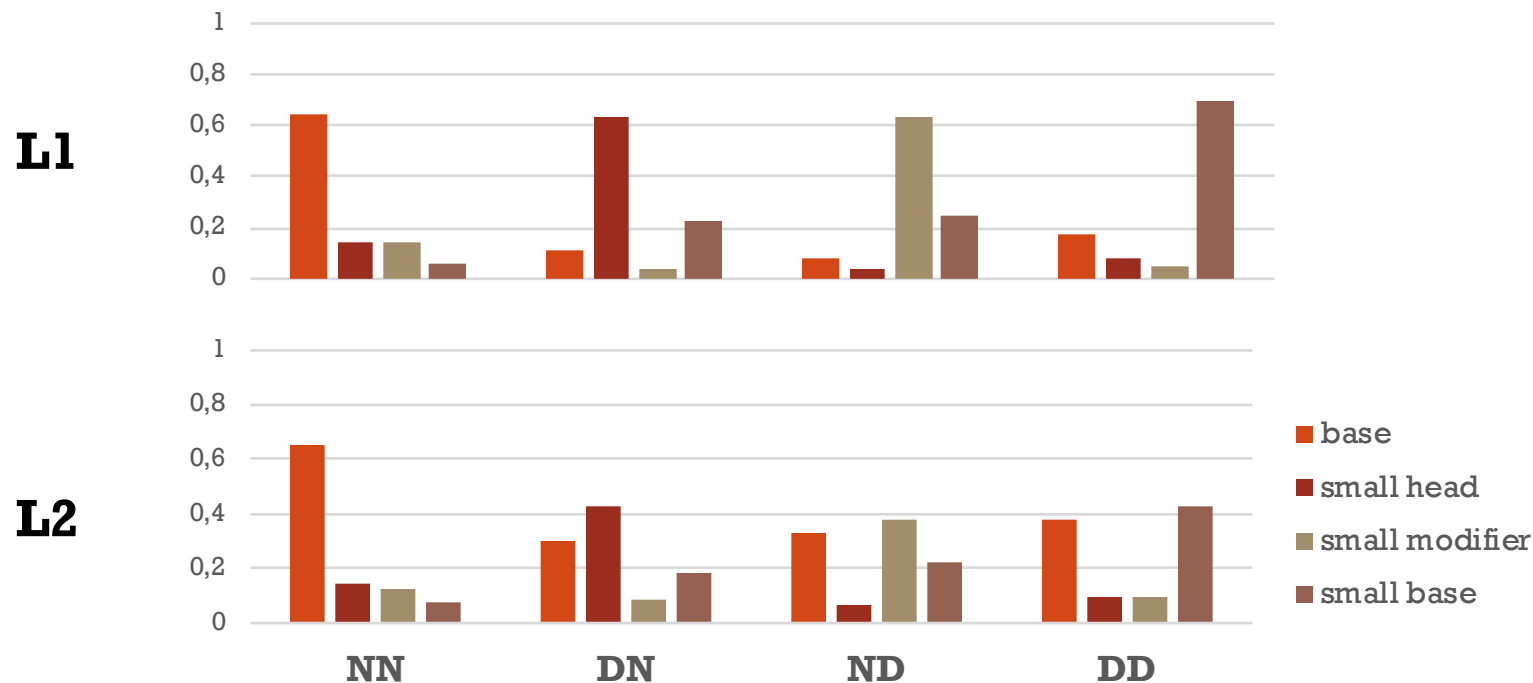
DISCUSSION: SPANISH VS BP

L1 BP & L1 Spanish speakers' results in NN compounds



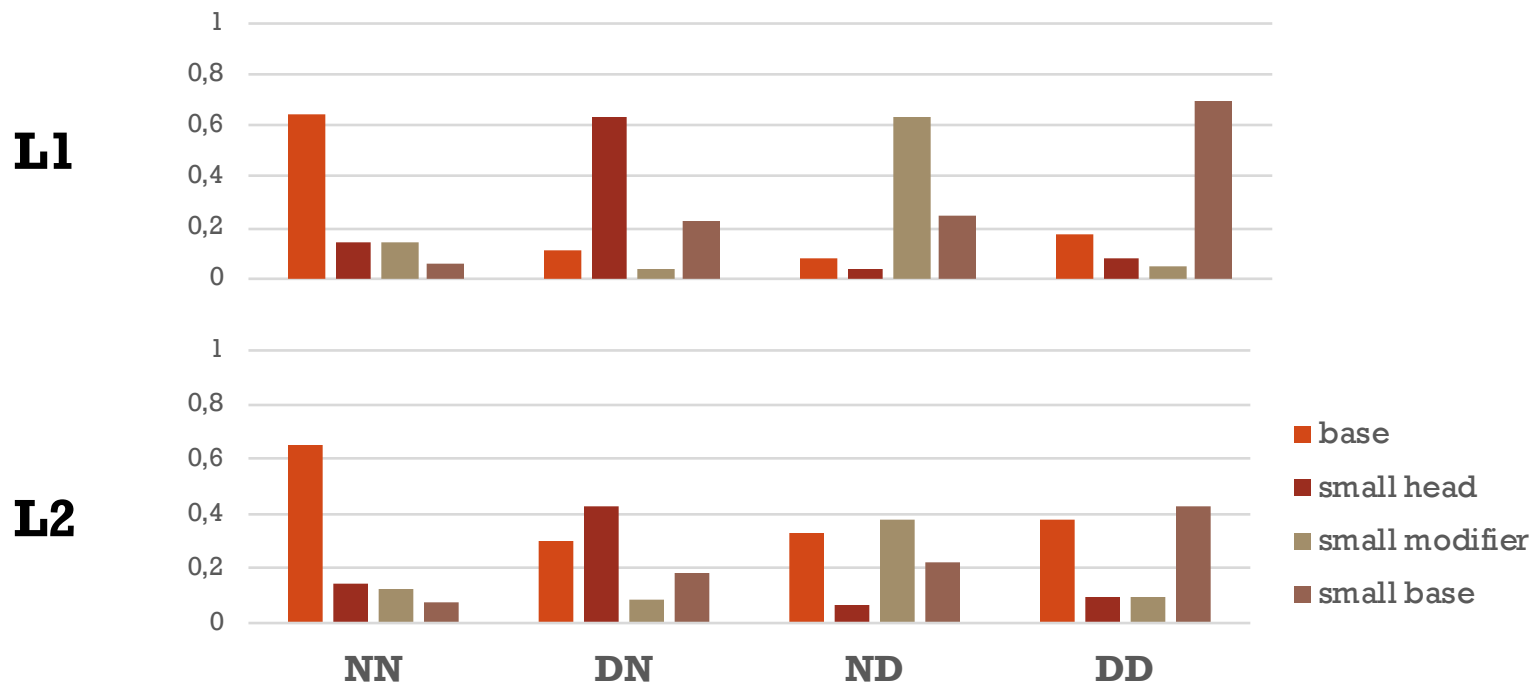
- In contrast to Spanish speakers, for BP speakers the diminutive on the head does not allow for scope over the entire compound
- Diminutive as default and as value
 - a different role in morphology and semantics?

DISCUSSION: L2 VS L1



- There was significantly more variation in the picture selections of the L2 BP speakers than the L1 BP speakers, illustrating that the L2 speakers are less sure of the effect of different attachments of *-in*ho

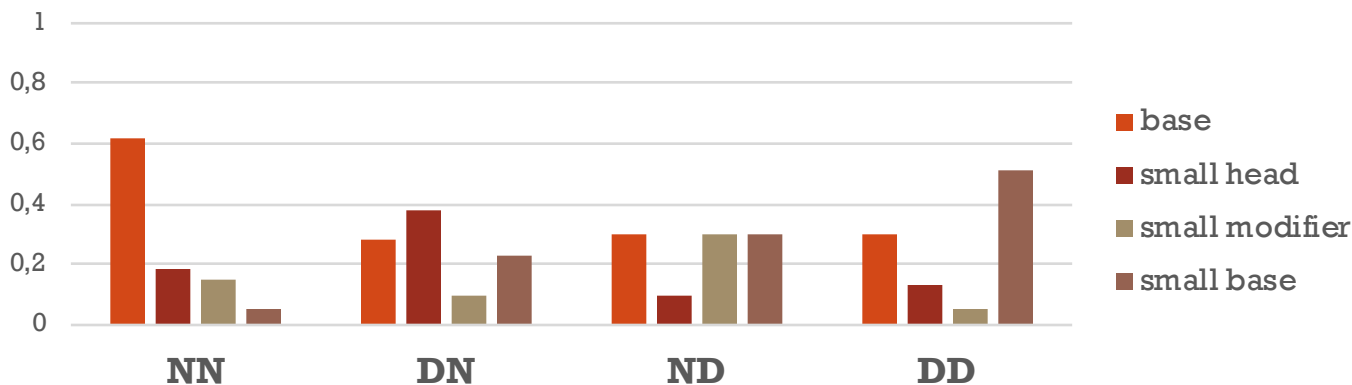
DISCUSSION: L2 VS L1



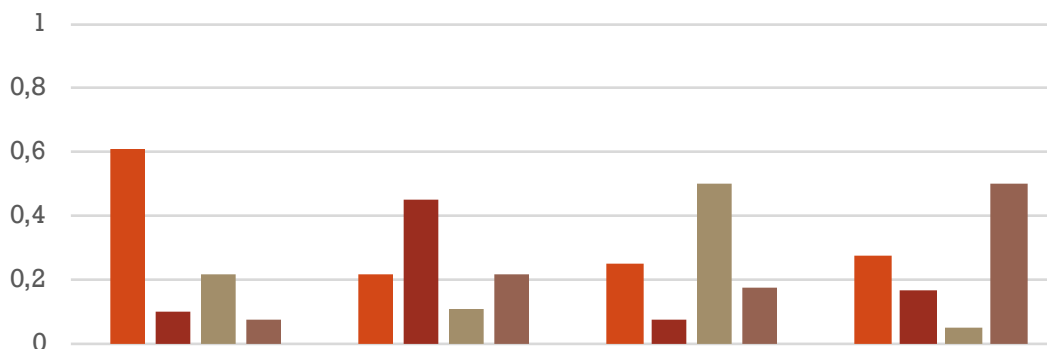
- Though the overall pattern of results was similar for both the L1 and L2 BP speakers, we would like to argue that L2 speakers do not have the same interpretation of *-in* in BP NN compounds as L1 speakers do

DISCUSSION: L2 BP VS L2 SPANISH

L2 BP BP NN



L2 Spanish Spanish NN



- L2 Spanish speakers clearly differed from L1 Spanish speakers in their interpretations of *-ito* in Spanish NN compounds (Liceras & Klassen 2017)
- The L2 BP speakers pattern with the L2 Spanish speakers, individualising the attachment of the diminutive

CONCLUSIONS

- L1 Brazilian Portuguese speakers do **not** pattern with L1 Spanish speakers in their interpretation of derivational morphology in NN compounds
- L2 Brazilian Portuguese speakers pattern with L2 Spanish speakers
 - this seems to suggest that the interpretation of morphology is different in L2 grammars
- There was no effect of the L1 on the L2 Brazilian Portuguese speakers' interpretations
 - even L1 Spanish speakers did not differ from the other L1s
 - no clear evidence of L1 transfer

THANK YOU!

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