

The representation of headedness in the mind of non-native Spanish speakers

Evidence from compounding and derivation

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Aim

- ▶ investigate L1 and L2 Spanish speakers' interpretation and acceptance of derivational morphology in Noun-Noun (NN) compounds

un perro policía

a dog police

'a police dog'



-ito / -ita

'little'

un perr-ito policía





NN compounds

Inflectional morphology

Inflectional Morphology

un perro policía

'a police dog'



Inflectional Morphology

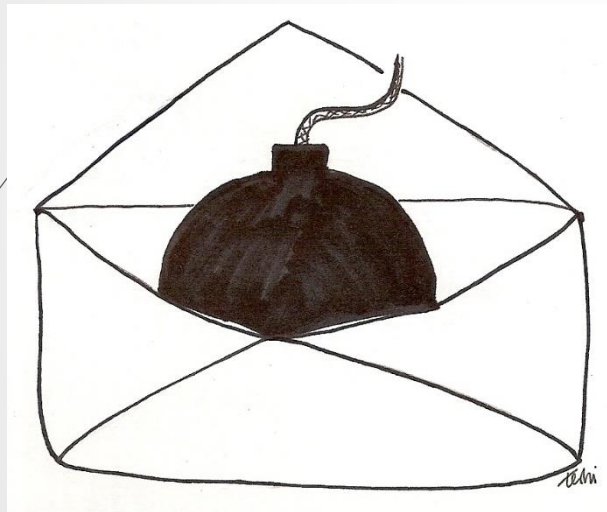


dos perros policía / *dos perro policías

two dogs police

'two police dogs'

Inflectional Morphology

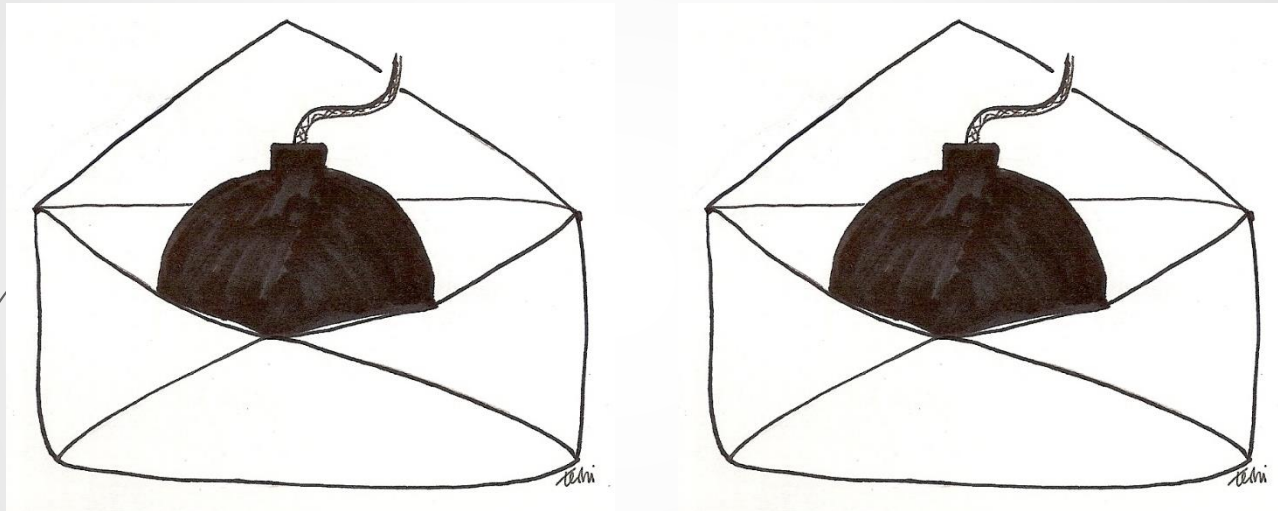


una carta bomba

a letter bomb

'a letter bomb'

Inflectional Morphology



dos cartas bomba / *dos carta bombas

two letterss bomb

'two letter bombs'



Inflectional Morphology



- What is a '**carta bomba**'?
 - a letter...
- What is a '**letter bomb**'?
 - a bomb...



Inflectional Morphology

- ▶ inflectional morphology and headedness
 - ▶ Spanish: left-headed
 - ▶ English: right-headed

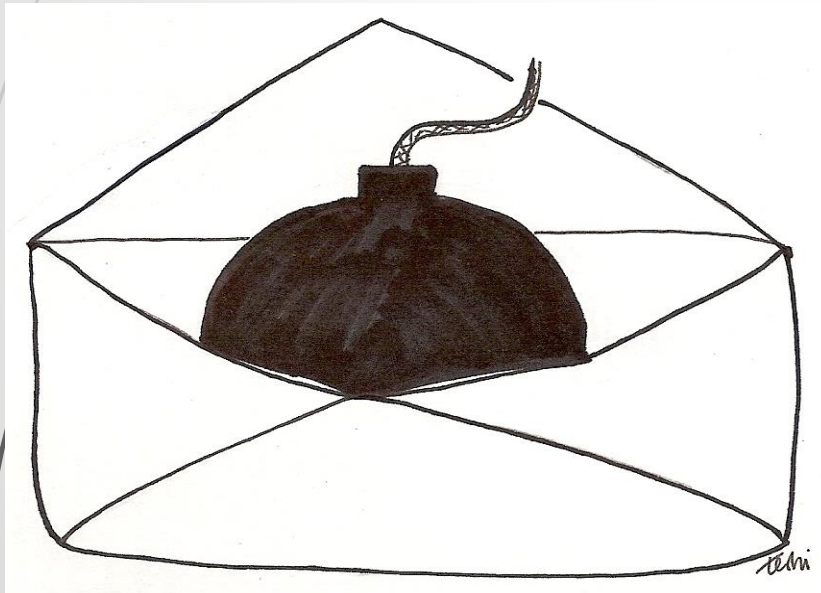


N-N compounds

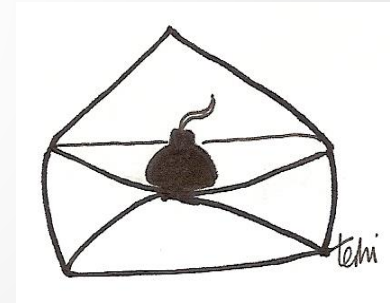
Derivational morphology

Derivational Morphology

carta bomba

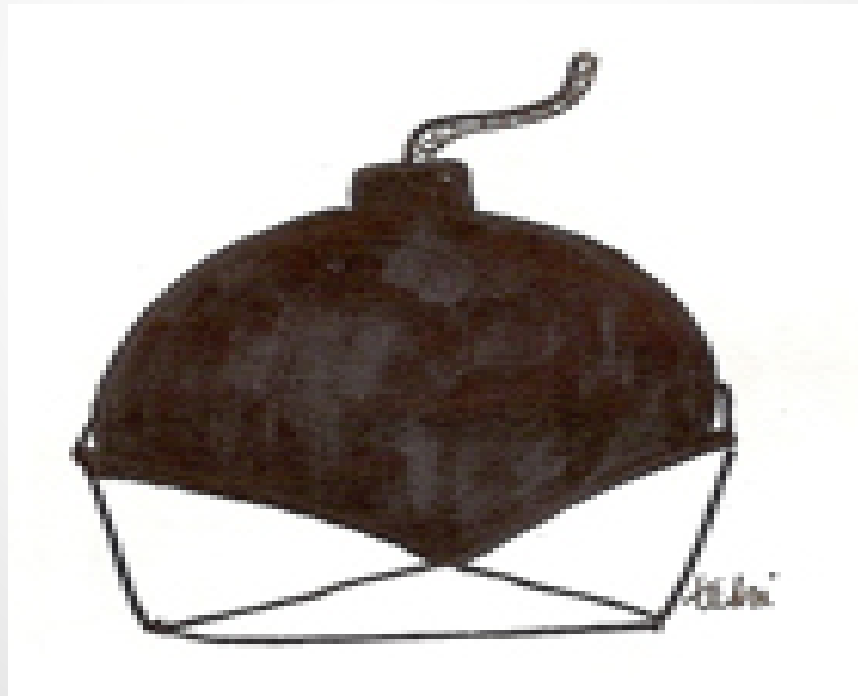


cartita bomba



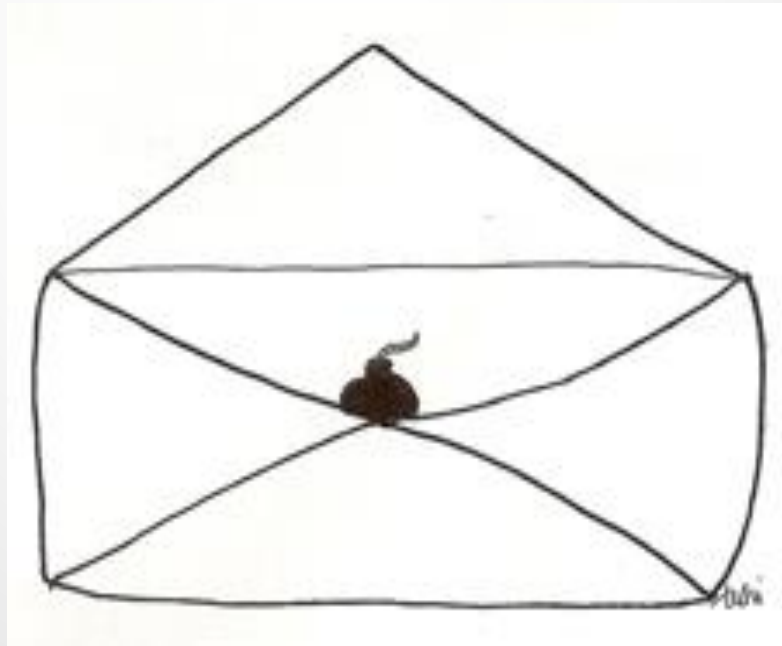
Derivational Morphology

¿cartita bomba?



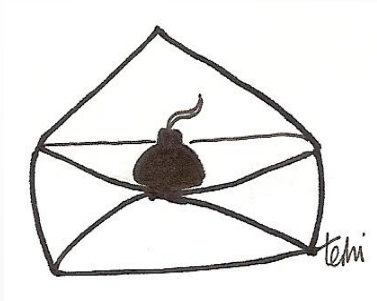
Derivational Morphology

¿carta bombita?



Derivational Morphology

¿cartita bombita?



Derivational - Inflectional

casita cuna

little house crib / 'little crib house'

*casa cunita

Zwicky (1988)

BUT...

➔ Scope selection

casita cuna

casa cunita

Cinque (2005)

Research Question

Will derivational morphology be treated as inflectional morphology by L2 Spanish speakers?

hombres lobo / *hombre lobos

‘werewolves’

hombrecito lobo / ?hombre lobito

‘little werewolf’

If the two types of morphology behave the same...

- ▶ the diminutive on the head will have scope over the whole compound
- ▶ the diminutive on the modifier will only have scope (if at all) over the modifier



The Present Study

In this study, L1 English-L2 Spanish and L1 Spanish speaking adults performed two NN compound tasks:

1. picture task
 - ▶ depictions first step in determining speaker intuitions
2. acceptability judgment task
 - ▶ directly compare inflectional and derivational morphology

A decorative graphic on the left side of the slide. It features a solid blue arrow pointing to the right, positioned horizontally. Behind the arrow and extending upwards and to the right are several thin, curved grey lines that create a sense of movement or a stylized background element.

Picture Task

Picture Task

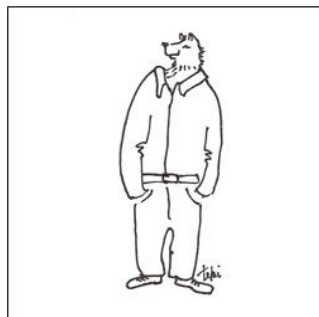
Participants

- ▶ 60 L1 English-L2 Spanish speakers
 - ▶ high-intermediate level of proficiency in Spanish
- ▶ 51 L1 Spanish speakers

Task

- ▶ select the picture that best represents the written compound
- ▶ 16 compounds (*-ito*)

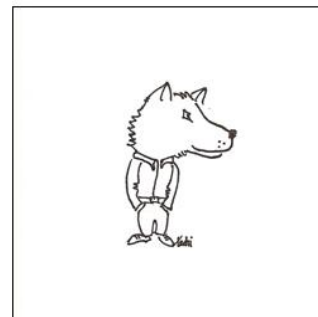
Hombre lobito



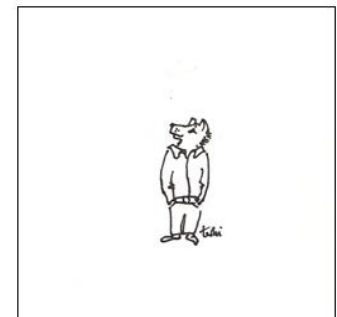
○



○



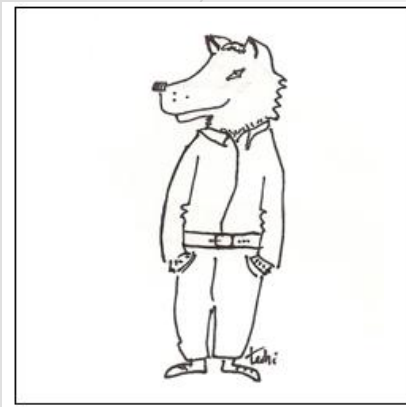
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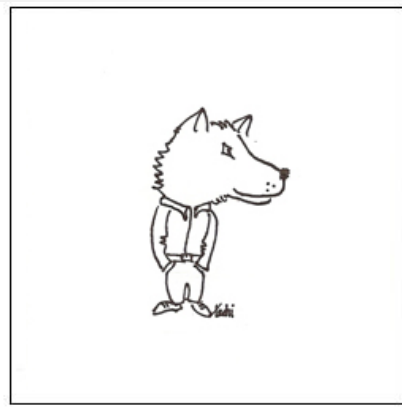
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Data Coding

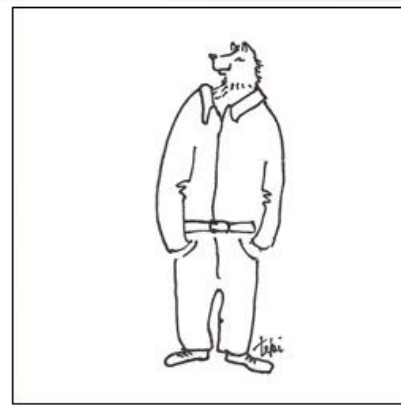
▶ picture classification:



balanced



small head



small modifier

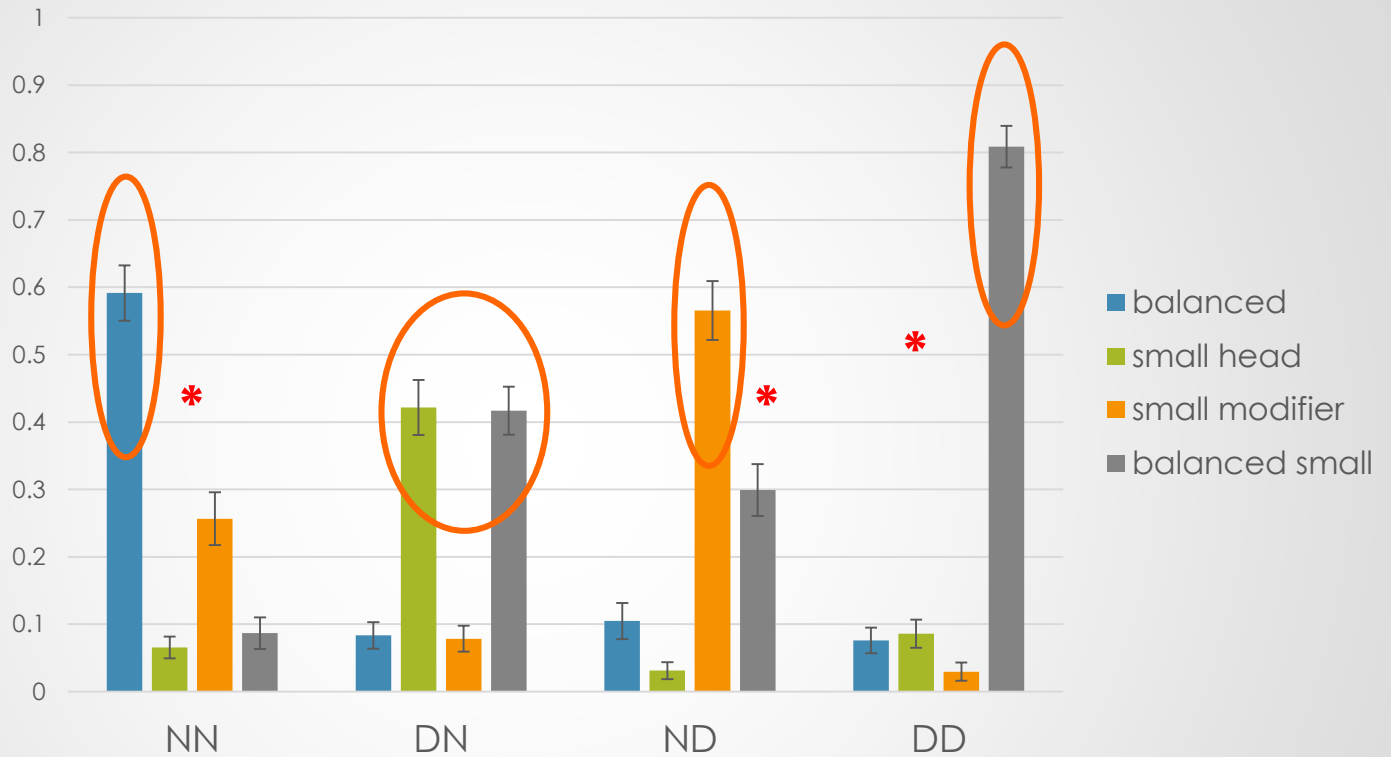


balanced small

▶ types of N-N compounds:

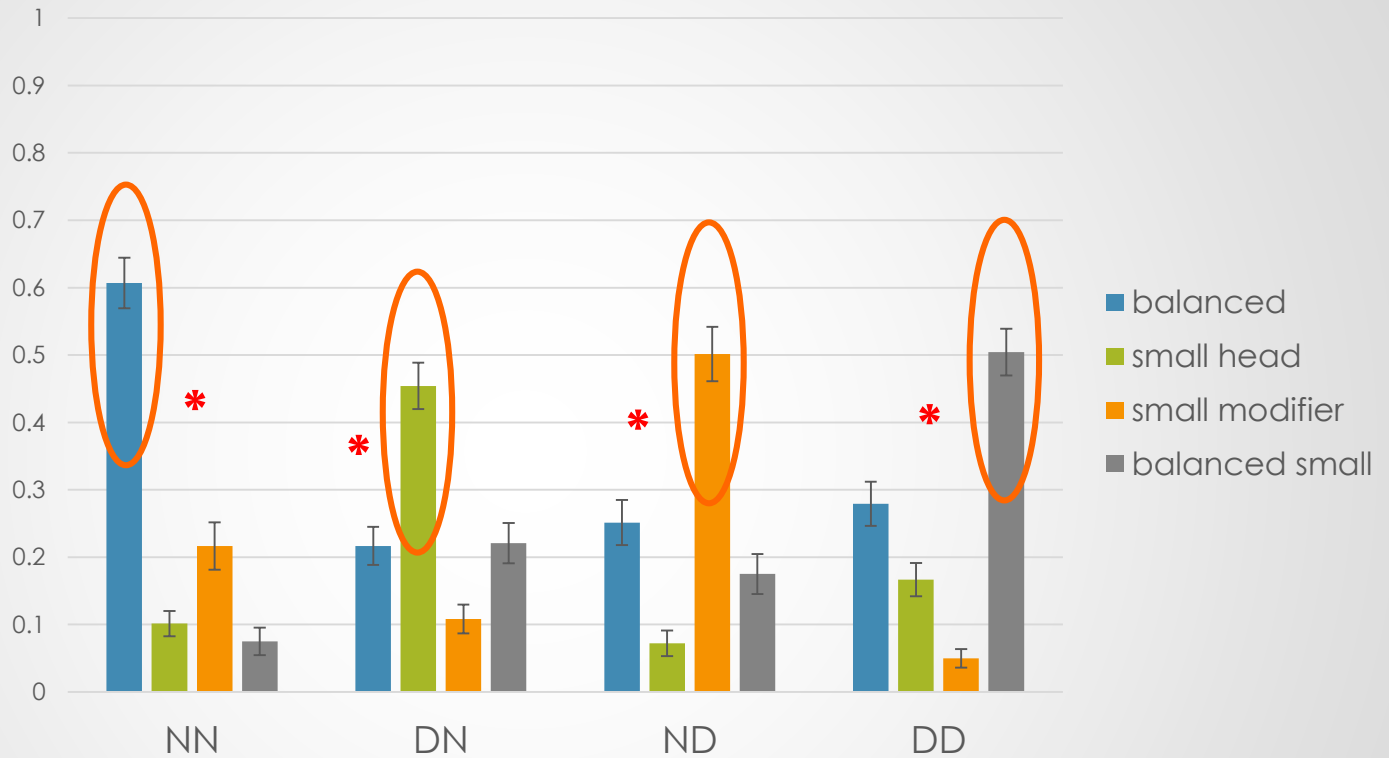
- ▶ **NN** bare Ns *hombre lobo*
- ▶ **DN** diminutive affix on head *hombrecito lobo*
- ▶ **ND** diminutive affix on modifier *hombre lobito*
- ▶ **DD** diminutive affix on both Ns *hombrecito lobito*

Results: L1 Spanish



- **NN** balanced
- **DN** small head/balanced small
- **ND** small modifier
- **DD** balanced small

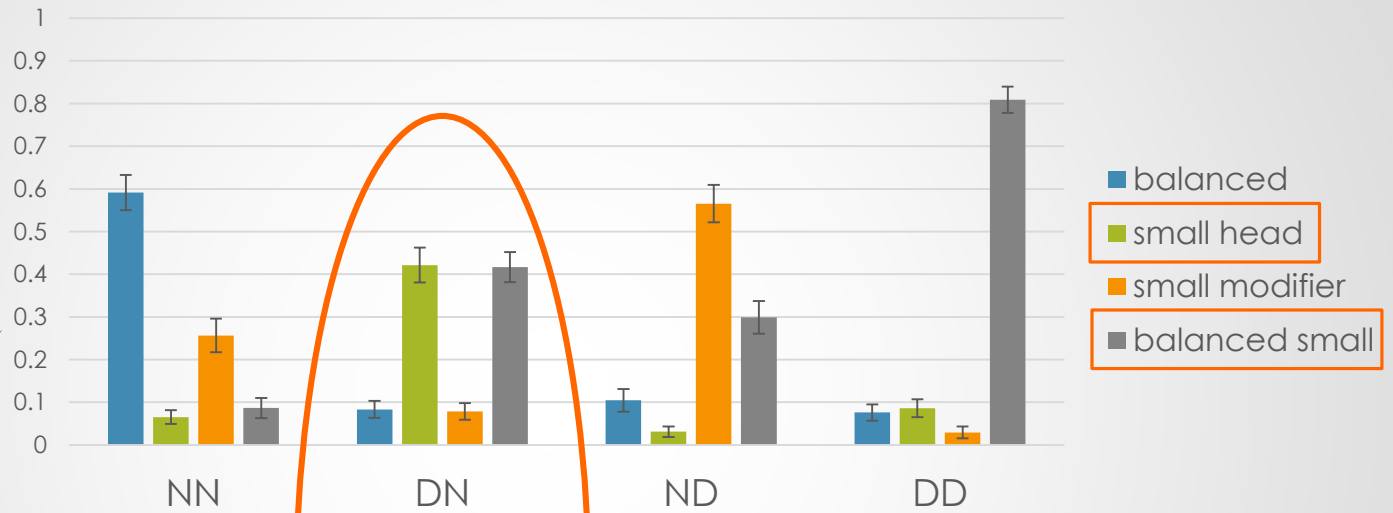
Results: L2 Spanish



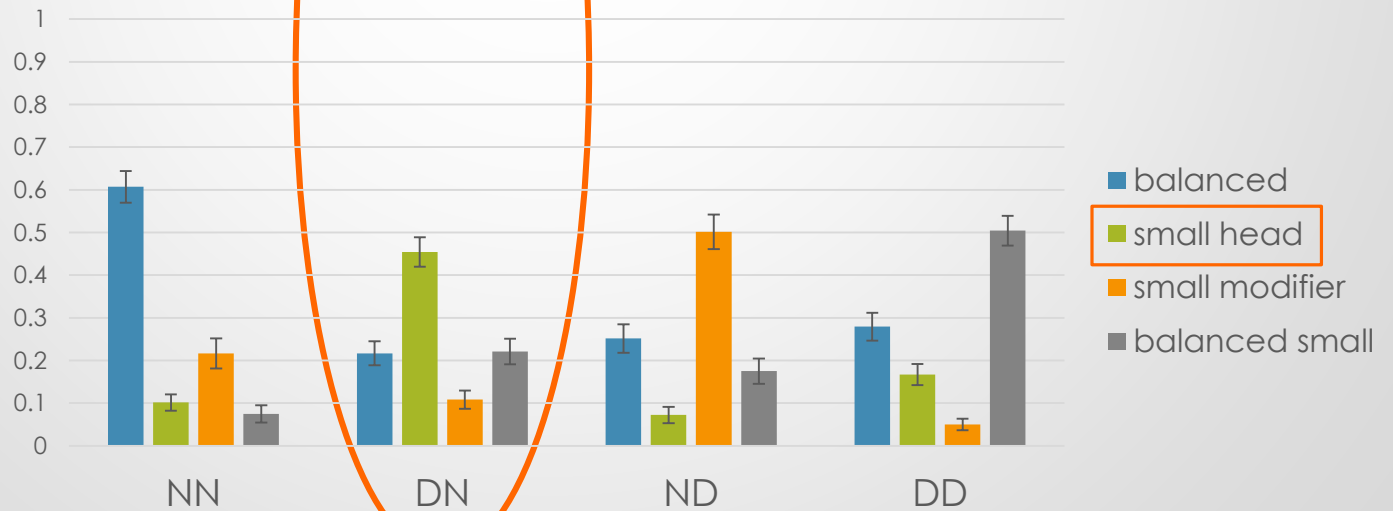
- **NN** balanced
- **DN** small head
- **ND** small modifier
- **DD** balanced small

Results: L1 vs L2

L1



L2



Discussion

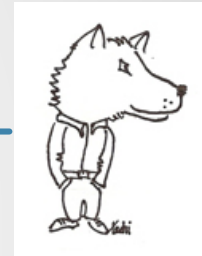
L1

NN, DD as expected

- ▶ balanced (NN) and balanced small (DD) were forced by the picture options provided in the task

DN (*hombrecito lobo*)

- ▶ balanced small/small head
- ▶ if the interpretation is balanced small...
 - ▶ diminutive has scope over the whole compound
- ▶ if the interpretation is small head...
 - ▶ diminutive only has scope over the head
- ▶ the fact that the diminutive can have scope over only the head may be due to *-ito* having two different meanings
 - ▶ little or cute



Discussion

L1

ND (*hombre lobito*)

- ▶ small modifier
- ▶ L1 Spanish speakers don't interpret the modifier as having scope over the whole compound
- ▶ *-ito* can be attached and interpreted on the modifier but doesn't have the same 'privileges' as the head



Discussion

L2

NN, DD as expected

- ▶ L2 Spanish speakers are aware that *-ito* = small

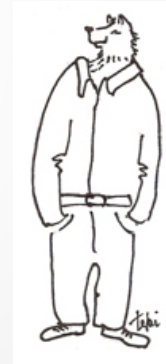
DN (*hombre**cito* lobo)

- ▶ small head



ND (*hombre lobo**ito*)

small modifier



- ▶ L2 Spanish speakers individualize the attachment and don't distinguish between *-ito* on the head vs. the modifier



Acceptability Judgment Task

Acceptability Judgment Task

Participants

- ▶ 27 L1 English-L2 Spanish speakers
 - ▶ advanced level of proficiency in Spanish
- ▶ 66 L1 Spanish speakers

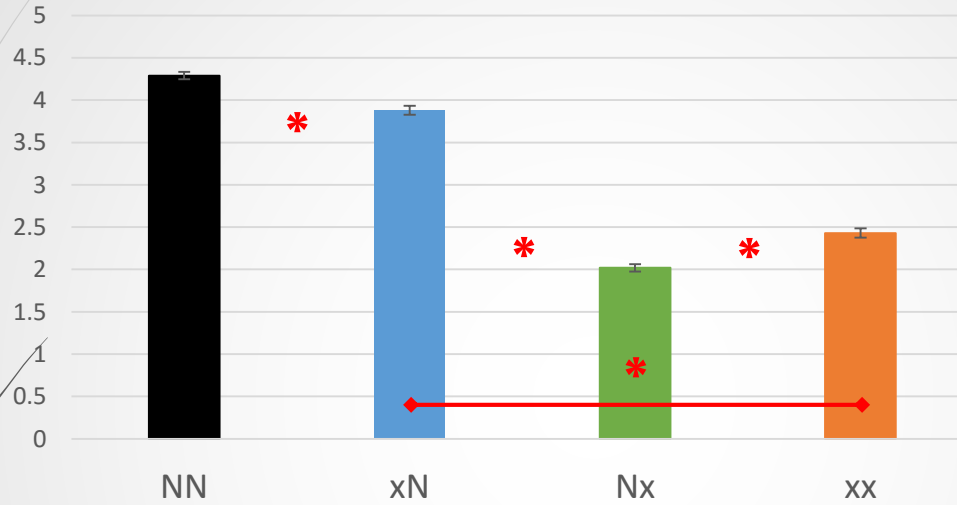
Task

- ▶ rate the written compound on a 5-point Likert scale
- ▶ 8 compounds

	compound type	inflection	derivation
NN	<i>carta bomba</i>	--	--
xN	affix on head	<i>cartas bomba</i>	<i>cartita bomba</i>
Nx	affix on modifier	<i>carta bombas</i>	<i>carta bombita</i>
xx	affix on both Ns	<i>cartas bombas</i>	<i>cartita bombita</i>

Results: Inflection

L1

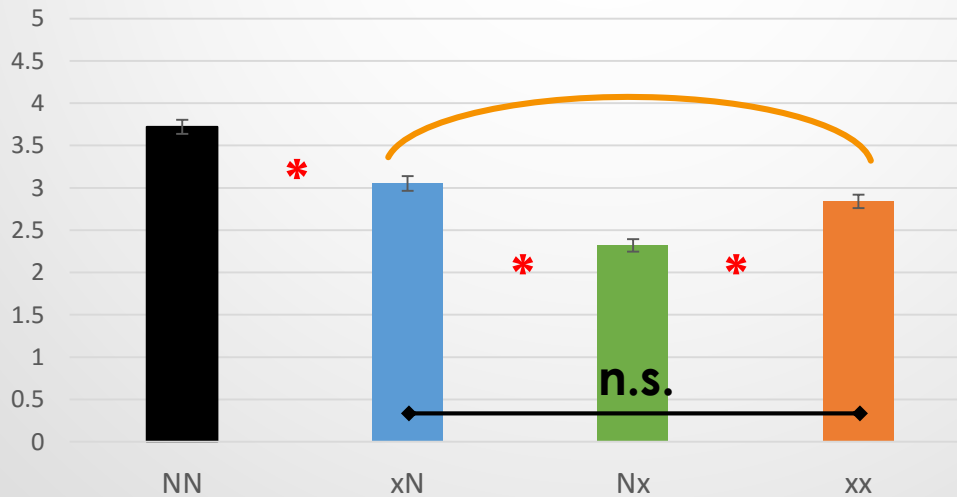


- highest rated: affix on head
- lowest rated: affix on modifier

cartas bomba

**carta bombas*

L2



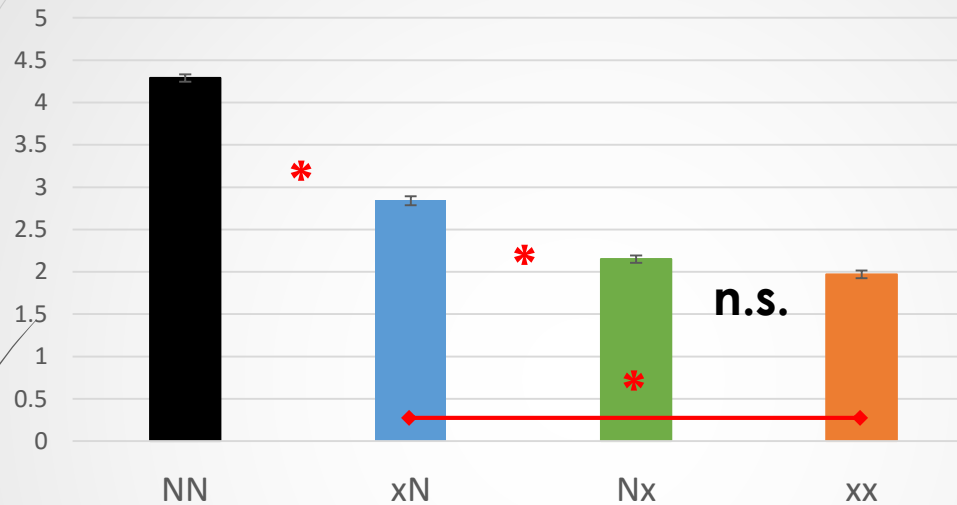
higher rating of affix on the head vs affix on both Ns is only a trend in the L2 data

cartas bomba

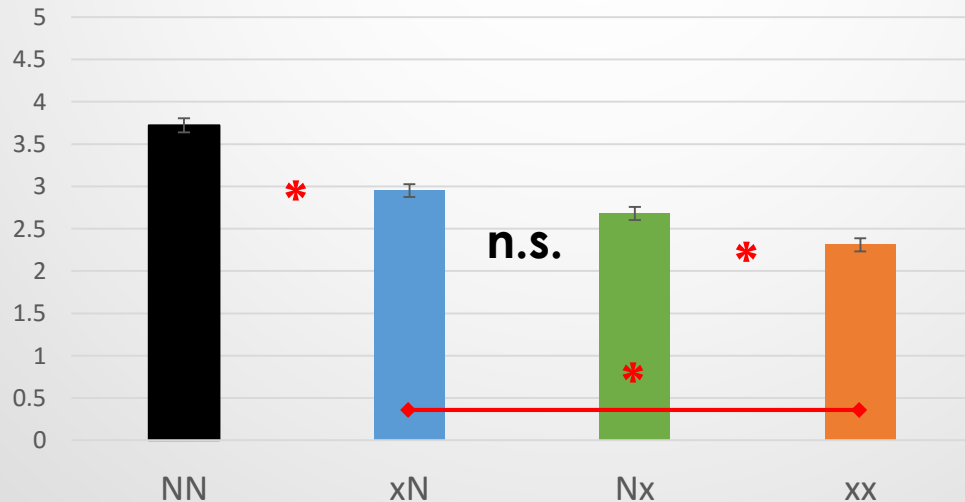
**cartas bombas*

Results: Derivation

L1



L2



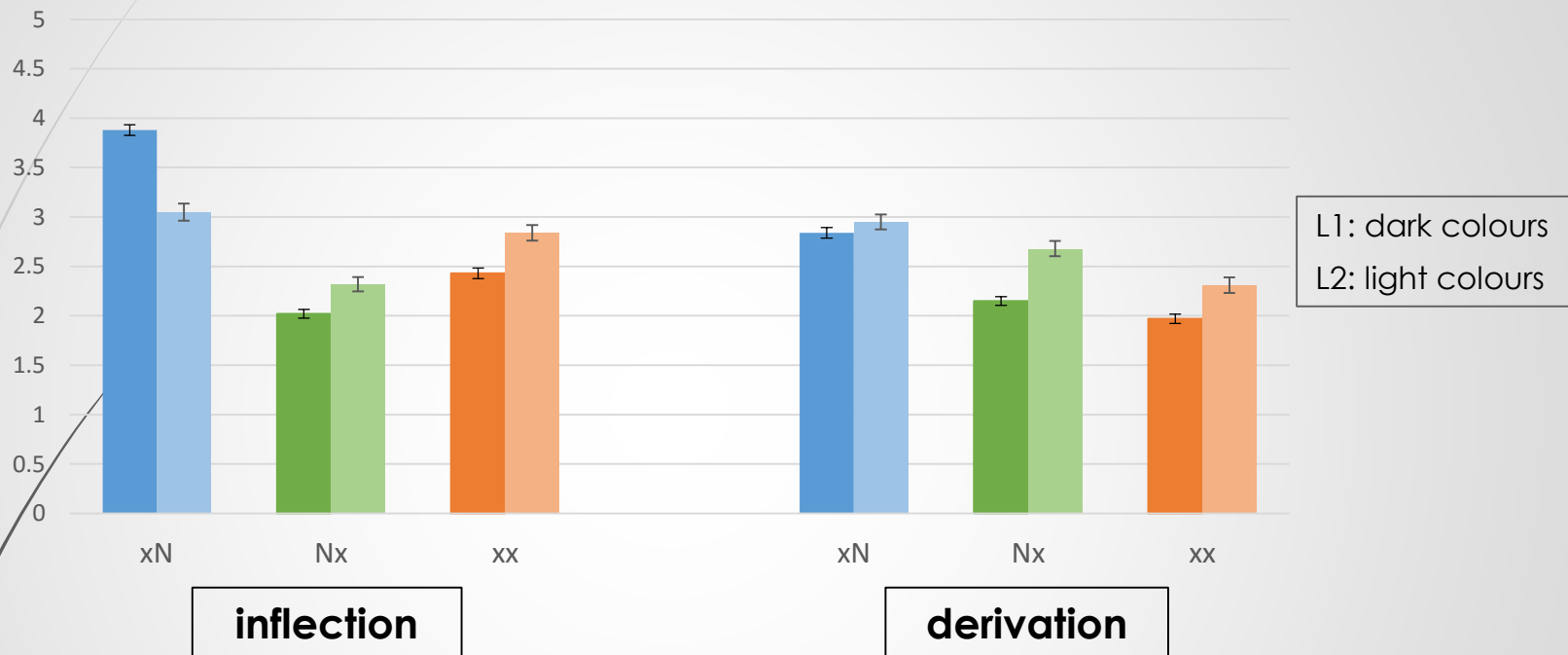
- **highest rated:** affix on head
- **lowest rated:** affix on both Ns (trend in L1)

cartita bomba
cartita bombita

higher rating of affix on the head vs affix on the modifier only a trend in the L2 data

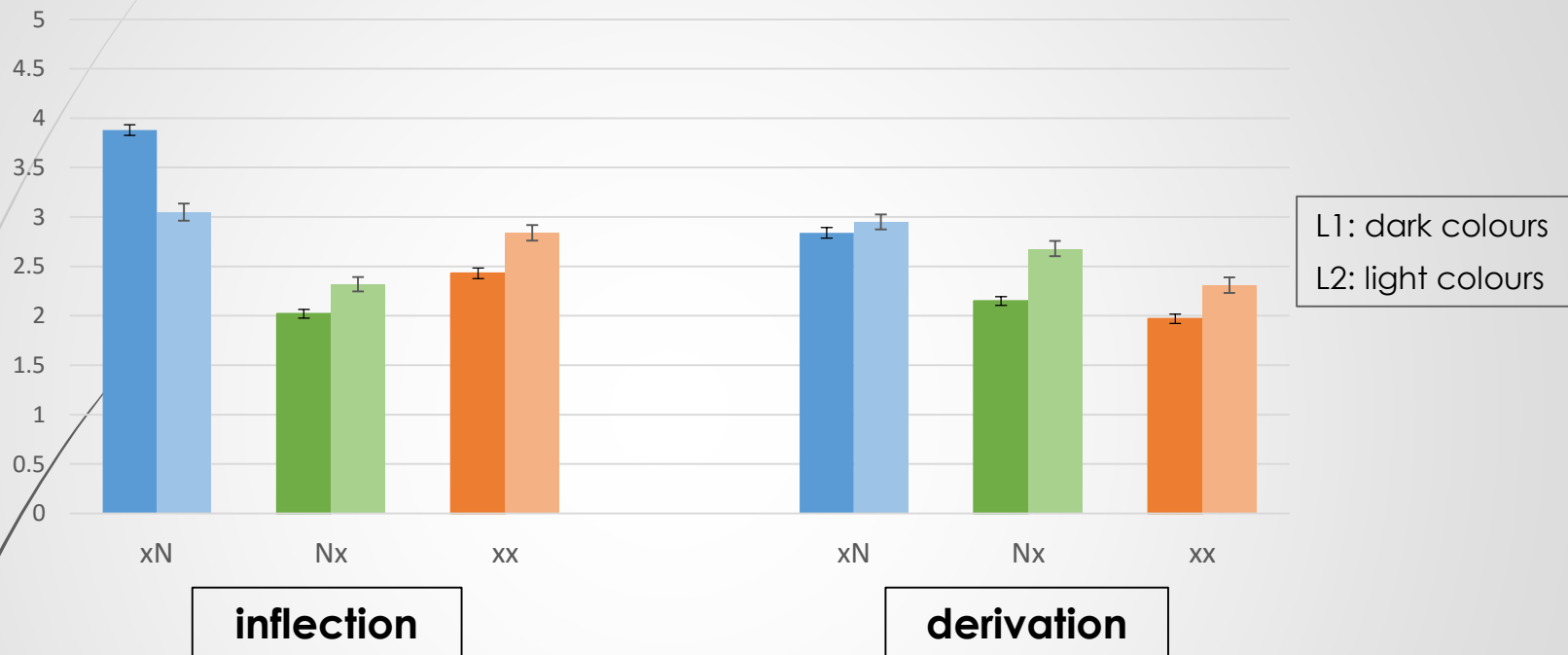
cartita bomba
carta bombita

Results: Inflection vs Derivation



- overall ratings significantly higher for compounds with inflectional than derivational affixes
- preference for compounds with the affixes on the head over the modifier (both inflection and derivation)
- affixes on both Ns significantly more acceptable with inflectional than derivational morphology

Results: Inflection vs Derivation



- L1 Spanish speakers always significantly prefer the affix on the head
- L2 Spanish speakers have somewhat less clear preferences with respect to the head
 - trend in preference for *-s* on head vs both Ns
 - trend in preference for *-ito* on head vs modifier

Discussion

L1
&
L2

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

- ▶ both inflectional and derivational affixes are preferred on the head
 - ▶ both L1 and L2 Spanish speakers are sensitive to headedness, though the L2 speakers to a lesser extent
- ▶ plural on the modifier rated lowest for inflectional morphology
 - ▶ clearly the ungrammatical option in the theory

Discussion

L1
&
L2

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

- ▶ *-ito* on both Ns rated lowest
 - ▶ semantic perspective:
 - ▶ stronger effect of redundancy with *-ito* than with *-s*
 - ▶ *-ito* carries more meaning
 - ▶ syntactic perspective:
 - ▶ unlike *-ito*, *-s* must be systematically marked in agreement
ie. *la*s *casas* *roja*s – *la* \emptyset *casita* *roja* \emptyset



Conclusions

- ▶ L1 Spanish speakers treat inflectional and derivational morphology the same with respect to headedness
 - ▶ in the picture task they did not allow for *-ito* on the modifier to have scope over the whole compound
 - ▶ in the acceptability judgment task, both *-ito* and *-s* on the head were significantly preferred over attachment to the modifier or both Ns
- ▶ overall, the L2 Spanish speakers tend to pattern with the L1 Spanish speakers, but with some important differences
 - ▶ in the picture task they individualized the attachment of *-ito* such that it only has scope over the element it is attached to
 - ▶ in the acceptability judgment task, the preference for attachment to the head was only a trend with both affixes

Conclusions

- ▶ headedness has a different status in the L1 and L2 grammars
 - ▶ headedness is ingrained in L1 Spanish speakers and the head of the compound has a privileged status
 - ▶ L2 Spanish speakers are not sensitive to headedness in Spanish
 - ▶ though their judgments resemble those of L1 speakers, they conceptualize the compounds differently
- ▶ Zwicky's (1988) proposal seems to be most in line with L1 and L2 Spanish speaker intuitions
 - ▶ only affixes on the head can have scope over the whole compound
 - ▶ caveat: L2 Spanish speakers allow for restricted scope of the affix on the head (ie. does not have scope over the whole compound)



Thank you!

¡Gracias!



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Future Directions

- ▶ further examine the semantics of derivational affixes
 - ▶ little vs cute
- ▶ look at the possible role of productivity
 - ▶ NN compounds not productive in Spanish but very productive in other languages such as English
- ▶ investigate inflectional and derivational morphology in other languages
 - ▶ double plural in French
 - ▶ languages with evaluative affixes and productive NN compounds (?)
 - ▶ headedness
 - ▶ parallels between inflectional and derivational morphology