

# Spanish evaluative affixes and the representation of headedness in the mind of the speaker

## An inflection–derivation divide?

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# Aim

- ▶ investigate the interpretation of derivational morphology in Noun-Noun (NN) compounds by native speakers of Spanish

**un perro policía**

*a dog police*

'a police dog'



**-ito / -ita**

'little'





# 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 mujer pulpo**  
a woman octopus  
'an octopus woman'



# Inflectional Morphology

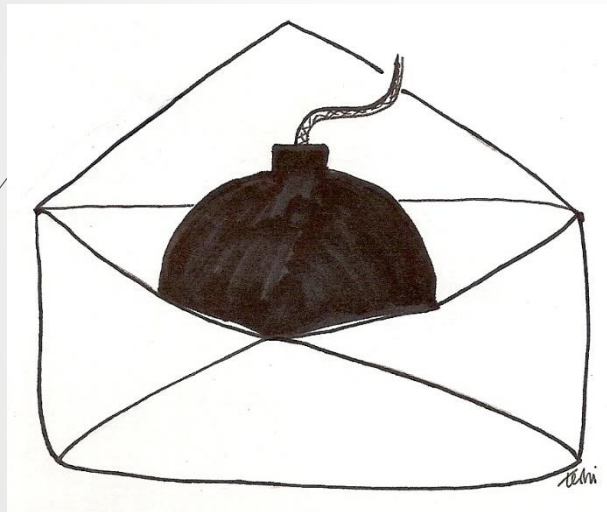


dos mujeres pulpo / \*dos mujer pulpos

two women octopus

'two octopus women'

# Inflectional Morphology



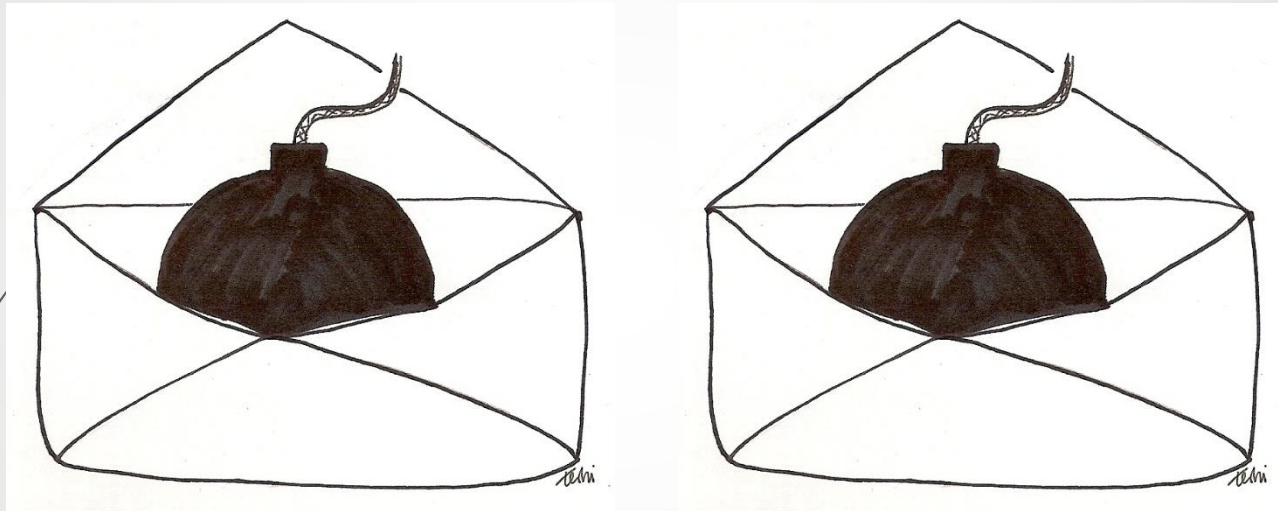
**una carta bomba**

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

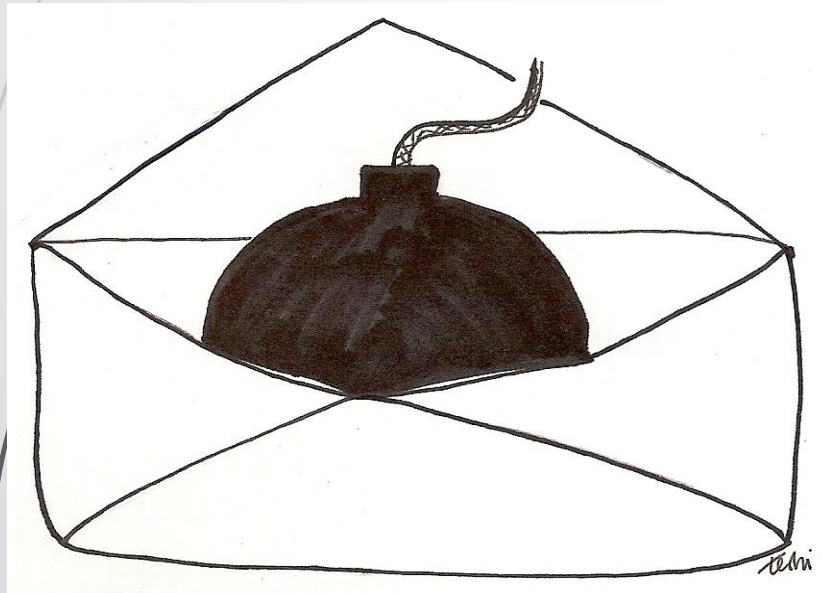


# N-N compounds

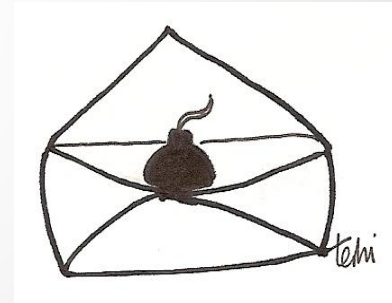
Derivational morphology

# Derivational Morphology

carta bomba



cartita bomba



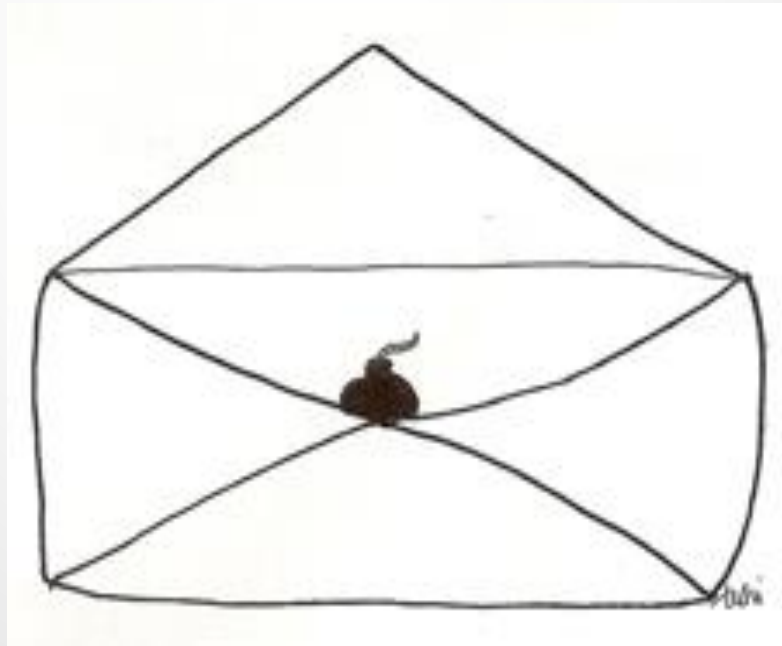
# Derivational Morphology

¿cartita bomba?



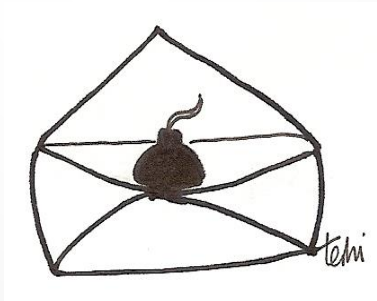
# Derivational Morphology

¿carta **bombita**?



# Derivational Morphology

¿cartita bombita?





# Derivational Morphology

*\*/???*    *Es una cartita bomba muy grande*  
It is a    little letter bomb    very large

*??*    *Es una carta bombita muy grande*  
It is a    letter little bomb very large

*??*    *Es una cartita bombita muy grande*  
It is a    little letter little bomb very large

\* 'It is a very large little letter bomb'

'It is a very large cute letter bomb'

(not meant to explode)

# Derivational Morphology

hombre lobo

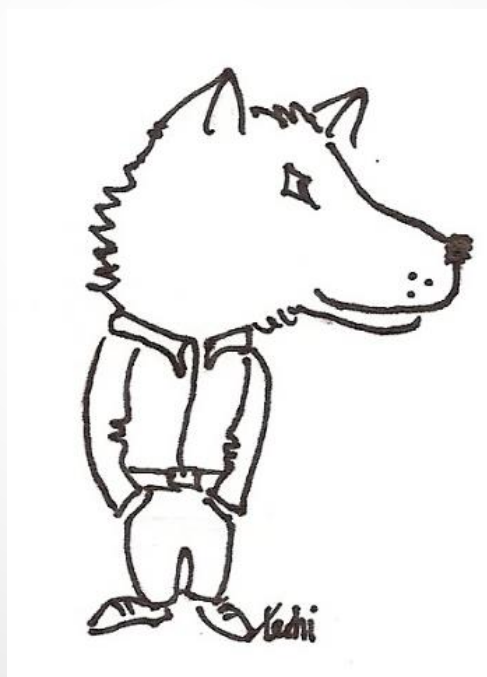


hombrecito lobo



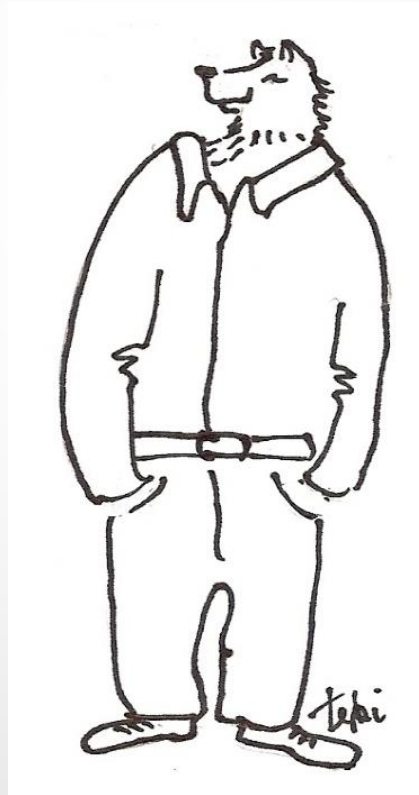
# Derivational Morphology

hombrecito lobo



# Derivational Morphology

hombre lobito



# Derivational Morphology

hombrecito lobito



# Derivational Morphology

\* /??  
*Es un hombrecito lobo enorme*  
It is a little man wolf huge

??  
*Es un hombre lobito enorme*  
It is a man little wolf huge

??  
*Es un hombrecito lobito enorme*  
It is a little man little wolf huge

\* 'It is a huge little werewolf'

'It is a huge cute werewolf'

# Derivational - Inflectional

casita cuna

little house crib / 'little crib house'

\*casa cunita

Zwicky (1988)

*BUT...*

➔ Scope selection

casita cuna

casa cunita

Cinque (2005)

# Assumptions

- ▶ scope selection as in Cinque (2005)
- ▶ scope selection as an instance of ‘deponency’ in morphosyntax (Bermudez-Otero, 2007)

Nempe	patrem	<b>sequ-untur</b>	liber-i
Of course	father <sub>(acus.sing)</sub>	follow <sub>(3p.pl.pres.ind.<b>passive</b>)</sub>	children <sub>(nom.pl.)</sub>

[Livy, At urbe condita, Iv, 4, 11]

- ▶ scope over the whole compound when the affix is attached to the modifier



# Research Question #1

Will derivational morphology be treated as inflectional morphology by L1 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

## Research Question #2

Will [+animate] compounds be treated differently in terms of the scope of the diminutive?

[+animate] N-N compounds are very unnatural entities





# The Present Study

In this study, 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 flow.

# Picture Task

# Picture Task

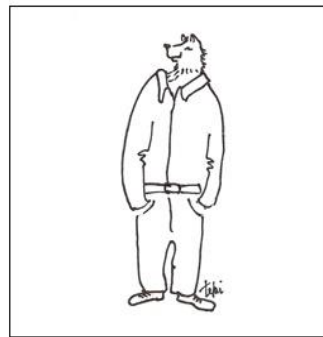
## Participants

- ▶ 51 L1 Spanish speakers (Spain)

## Task

- ▶ select the picture that best represents the written compound
- ▶ 8 [+animate] and 8 [-animate] compounds

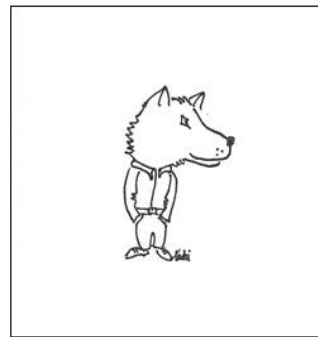
### Hombre lobito



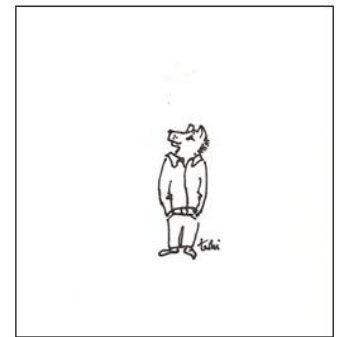
○



○



○



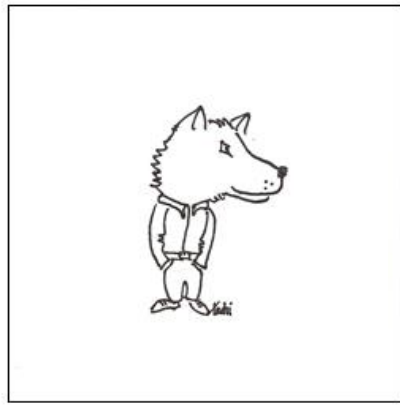
○

# Data Coding

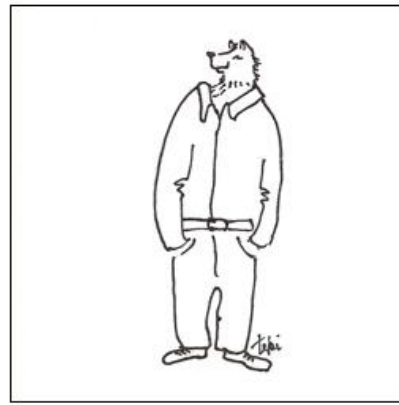
## ▶ picture classification:



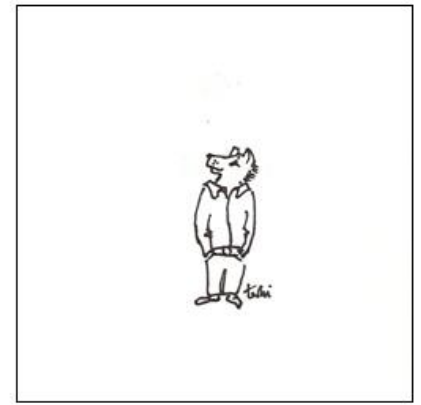
*balanced*



*small head*



*small modifier*

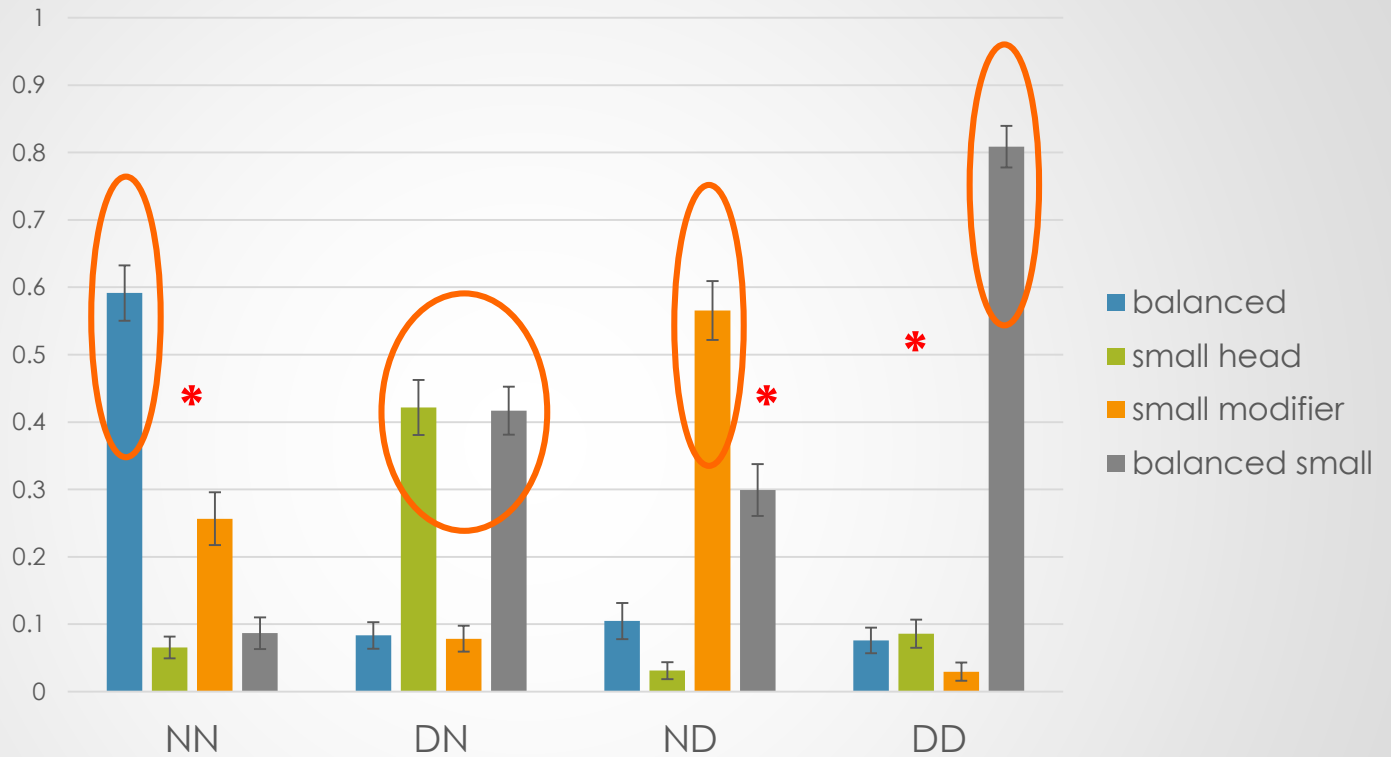


*balanced small*

## ▶ 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*

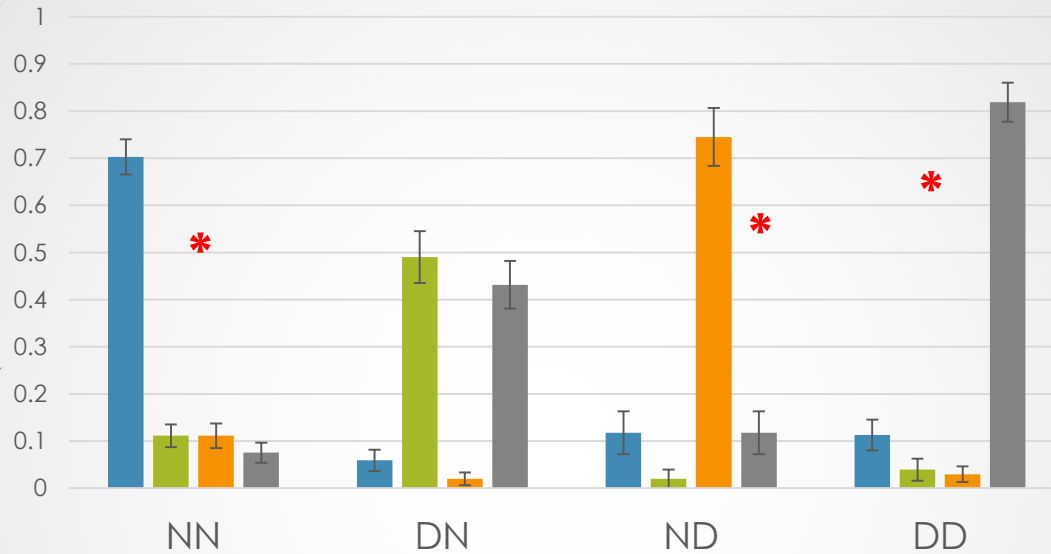
# Results



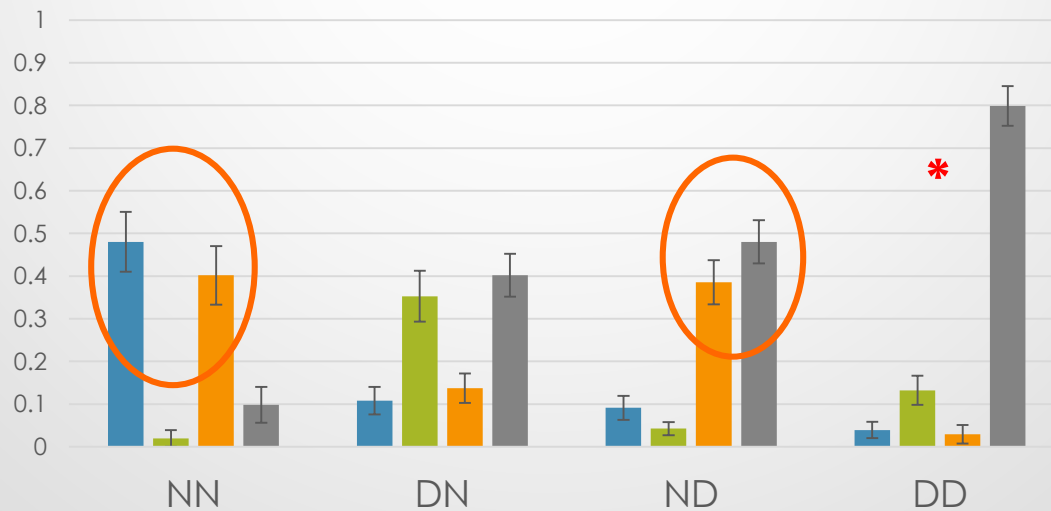
- **NN** balanced
- **DN** small head/balanced small
- **ND** small modifier
- **DD** balanced small

# Results: Animacy

**[-animate]**



**[+animate]**





# Discussion

## Derivational vs inflectional morphology (RQ#1)

**NN, DD** as expected given picture options

**DN** (*hombre**cito* *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 mean that *-ito* has two different meanings
  - ▶ little or cute



# Discussion

## Derivational vs inflectional morphology (RQ#1)

**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
  - ▶ head is important in derivational morphology, almost as important as in inflectional morphology



# Discussion

## Compound animacy (RQ#2)

- ▶ [-animate] compound results same as the overall results
- ▶ [+animate] compound results more noisy
  - ▶ NN & ND results different for [+animate]
- ▶ these results may be accounted for in terms of the nature of [+animate] compounds
  - ▶ unlike [-animate] compounds, [+animate] compounds consist of two non-separable entities





# Acceptability Judgment Task

# Acceptability Judgment Task

## Participants

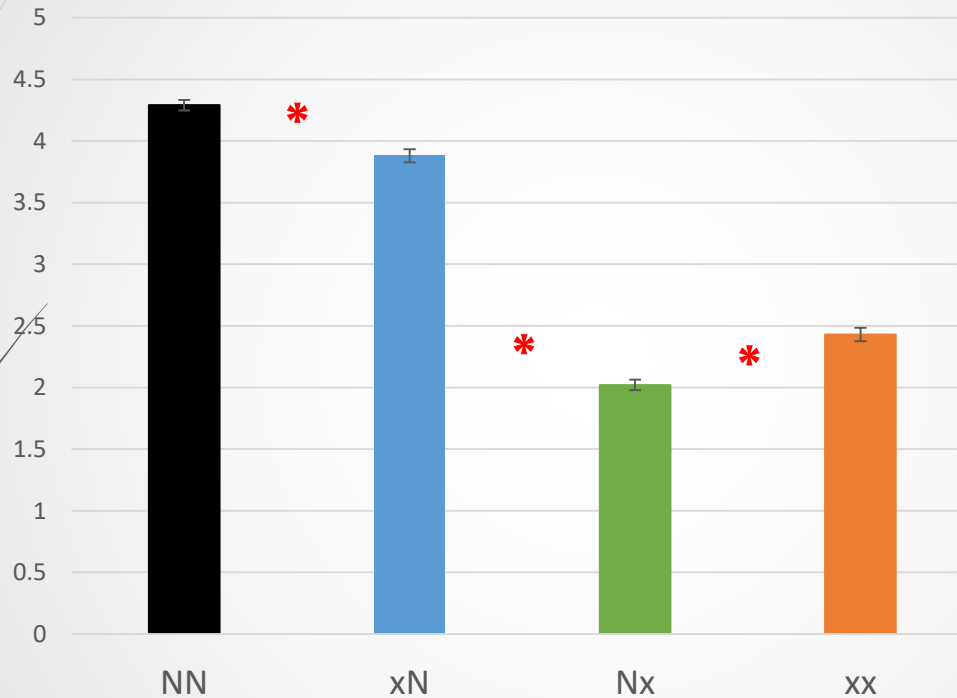
- ▶ 66 L1 Spanish speakers (Spain)

## Task

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

	compound type	inflection	derivation
<b>NN</b>	<i>carta bomba</i>	--	--
<b>xN</b>	affix on head	<i>cartas<b>s</b> bomba</i>	<i>cart<b>ita</b> bomba</i>
<b>Nx</b>	affix on modifier	<i>carta bombas<b>s</b></i>	<i>carta bomb<b>ita</b></i>
<b>xx</b>	affix on both Ns	<i>cartas<b>s</b> bombas<b>s</b></i>	<i>cart<b>ita</b> bomb<b>ita</b></i>

# Results: Inflection



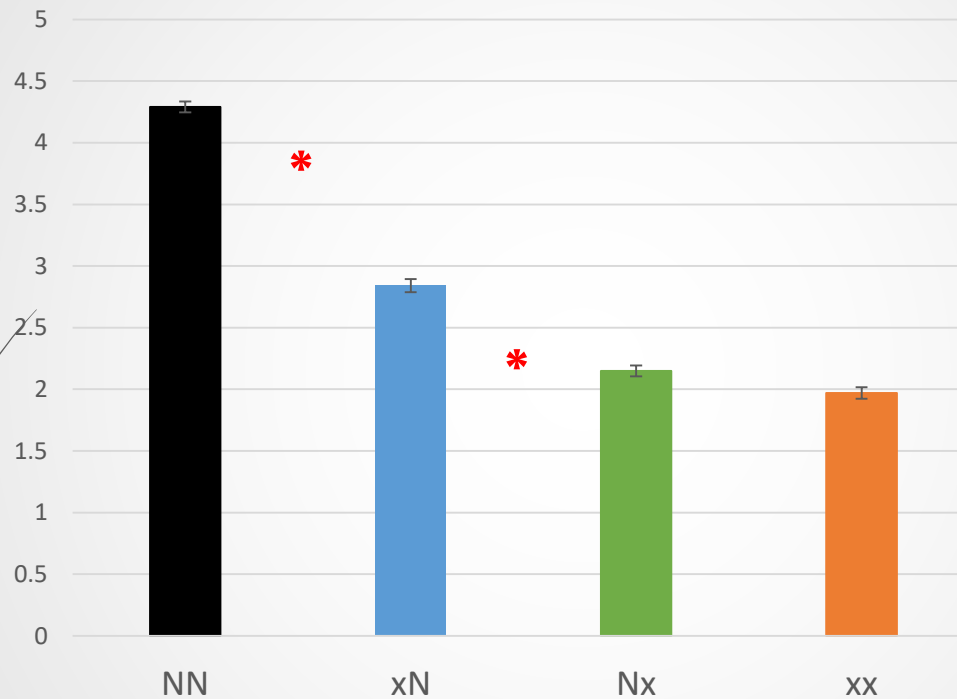
➤ **highest rated:**  
affix on head

➤ **lowest rated:**  
affix on modifier

*cartas bomba*

\**carta bombas*

# Results: Derivation

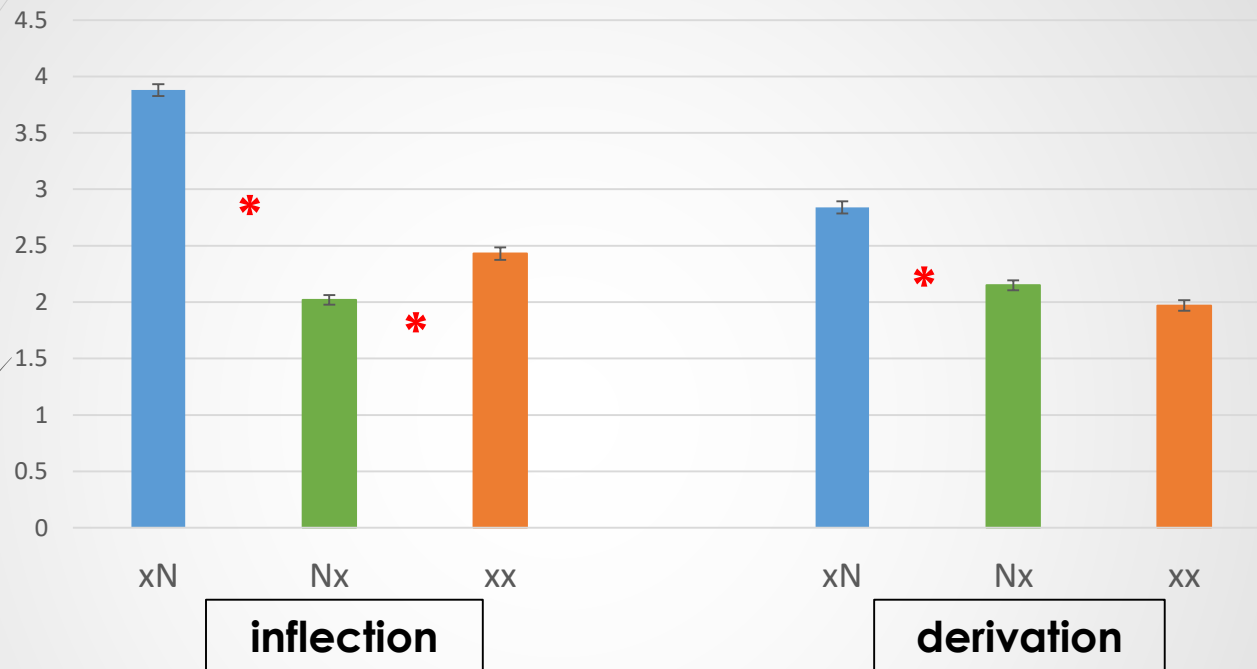


- **highest rated:**  
affix on head
- **lowest rated:**  
affix on both Ns

*cartita bomba*

*cartita bombita*

# Results: Inflection vs Derivation



- overall ratings significantly higher for compounds with inflectional than derivational affixes
- both types of morphology significantly preferred on the head over the modifier
- affixes on both Ns significantly more acceptable with inflectional than derivational morphology



# Discussion

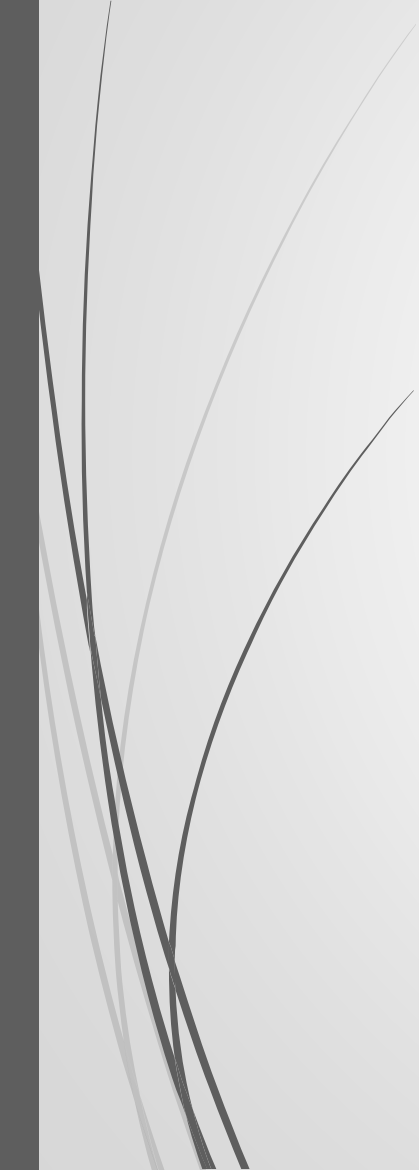
## Derivational vs inflectional morphology (RQ#1)

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

- ▶ both types of morphology are preferred on the head
  - ▶ native Spanish speakers are sensitive to headedness
- ▶ plural on the modifier rated lowest for inflectional morphology
  - ▶ clearly the ungrammatical option in the theory
- ▶ *-ito* on both the head and the modifier rated lowest for derivational morphology
  - ▶ stronger effect of redundancy with *-ito* than with *-s*
  - ▶ *-ito* carries more meaning

# Conclusions

- ▶ native 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 was significantly preferred over any other attachment
- ▶ Zwicky's (1988) proposal seems to be most in line with native Spanish speaker intuitions
  - ▶ only affixes on the head can have scope over the whole compound
- ▶ interpretation of *-ito* in [-animate] compounds is much clearer than [+animate] compounds
  - ▶ given that [ $\pm$ animate] is confounded with [ $\pm$ separability] we need a different task to examine possible effects of animacy





Thank you!

¡Gracias!



# Acknowledgments

- ▶ participants:
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  - ▶ Lia Walsh and the Language Acquisition Research Lab at the University of Ottawa
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  - ▶ Professor C. Martínez, Universidad Nebrija



# 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