

# Change in root-sensitivity of Basque allocutive marking

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Slides: [tiny.cc/digs23](https://tiny.cc/digs23)

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# 1. Introduction

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# Introduction

- **Allocutivity:** Morphological marking of non-thematic addressees.

(1) Retegik irabazi di-n/k.  
Retegi.ERG won AUX-2SG.FAM.FEM/MASC  
'Retegi has won.'

[Basque]

(2) Non che me dá pena ningunha.  
no 2SG.FAM 1SG give sorrow any  
'It doesn't make me feel bad at all.'  
(Álvarez Blanco, 1997, 38)

[Galician]

(3) Ham jaa-it h-i-au.  
I go-PROG be-1.SG-2.FAM  
'I am going.'  
(Alok and Baker, 2018)

[Magahi]

# Introduction

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- Formal descriptions of allocutive languages have recently burgeoned. Two of the main theoretical challenges to emerge from this literature are these:
  - i. What conditions the availability of allocutive morphemes in embedded domains (Alok, 2020, 2021; Alok and Baker, 2018; Alok and Haddican, 2022).
  - ii. How does allocutivity interact with other phenomena implicating person features in the left periphery?
    - Indexical shift (Alok, 2020, 2021; Alok and Baker, 2018; Sundaresan, 2018; McFadden, 2020).
    - Vocatives (Slocum, 2016; Portner et al., 2019; Akkuş and Hill, 2021).
    - Imperatives (Kaur and Yamada, 2019; Kaur, 2020).
    - C-T inheritance (Haddican, 2019).
    - Speaker/addressee-oriented adverbs.

# Introduction

- **Goal:** To report on judgment and production study of embedded allocutivity and its relationship to vocatives in Basque (N=421).
- The first large-sample controlled study of speaker-related predictors of embedded allocutivity.

- (4) a. Retegik irabazi di-n/k.  
Retegi.ERG won AUX-2SG.FAM.FEM/MASC  
'Retegi has won.'
- b. %Entzun di(n)at [Retegik irabazi di-n/k-ela].  
hear AUX Retegi.ERG won AUX-2SG.FAM.FEM/MASC-C  
'I've heard Retegi has won.'

## Main outcomes

- i. Embedded allocutivity readily accepted in judgment data and frequent in translation task data.
- ii. Judgment and production data both suggest change in progress toward embedded allocutive grammars.
- iii. No cross-speaker correlation in acceptance of embedded allocutives and embedded direct addresses contra Haddican and Etxeberria (to appear).
- iv. Embedded allocutivity favored in *if*-clauses and relatives, contra Haddican and Etxeberria (to appear).
- v. We model the inventory of grammars in terms of different ways in which the head introducing allocutive clitics (Addr) is licensed.

- §1. Introduction
- §2. Variable root-sensitivity of Basque allocutivity
- §3. A judgment and production study
- §4. Expressing the inventory of grammars
- §5. Summary

## 2. Variable root-sensitivity of Basque allocutivity

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## Embedding type effects

- Based on uncontrolled data, Haddican and Etxeberria (to appear) report that embedded allocutivity availability is insensitive to embedding type.

(10) *Factives*

Jon<sub>EPEN</sub> [ba-zetorre-(%k)-ela] ahaztu d-i-k.

Jon EPEN-come-2SG.FAM.MASC-C forget AUX-2SG.FAM.MASC

'Jon has forgotten that he/she/it is coming.'

(11) *Temporal clauses*

[Jon zetorre-(%k)-en]-ean ikusi-ko di-a-t.

Jon come-2SG.FAM.MASC-C.Q-in see-FUT AUX-2SG.FAM.MASC-1SG

'When John comes, I will see him.'

(12) *Embedded yes/no questions*

Ez zaki-a-t [zetorre-(%k)-en] ala ez.

NEG know-2SG.FAM.MASC-1.ERG COME-2SG.FAM.MASC-C or NEG

'I don't know if he's coming or not.'

# Tests for embedding

- Evidence that allocutive clitics are possible in true embeddings comes from two tests:
  - i. Unavailability of “*ba*-support”—a verb-second-position repair operation in root contexts (Ortiz de Urbina, 1989; Elordieta and Haddican, 2018).
  - ii. VP-fronting in negative contexts (Laka, 1990; Artiagoitia, 2003; Etxepare, 2003; Elordieta and Haddican, 2018).

(13) ***Ba-support***

[(*\*ba-*)zettore-(%*k*)-en] ekaitza.  
ba-come-2SG.FAM.MASC-C storm.DEF  
'The storm that is coming.'

(14) ***VP-fronting***

[*Ukatuko ez* di(%*a*)-te-en]-ez, Erreala hobea duk.  
deny.FUT NEG AUX-2SG.FAM.MASC-PL.ERG-C-as Real better COP  
'As they won't deny, Real are better.'

# Allocutivity and direct address expressions

- Some recent work has probed the relationship between allocutivity and vocative expressions (Slocum, 2016; Akkuş and Hill, 2021; Portner et al., 2019).
  - Both vocatives and allocutives refer to addressees.
  - Both express not-at-issue meaning.
  - Both are introduced high in the clausal sequence.
  - Vocatives, like allocutive morphemes in many languages, are often taken to be available only in root contexts (Hill, 2007, 2013; Slocum, 2016).

(15) **Dumb-ass**, I already said that.

- Some conservative dialects have gender-marked free vocative pronouns, for familiar addressees.

(16) Txo/ño#                      berandu du-*k/n*.  
VOC.MASC/VOC.FEM late        AUX-2SG.FAM.MASC/FEM  
'Yo, it's late.'

- These vocative pronouns and allocutive clitics are the only two contexts in which grammatical gender is marked in Basque.
- In common parlance, the use of allocutivity is referred to by these vocative expressions. That is, using allocutive clitics with a male interlocutor is referred to as *to-ka* ('to-doing') and with a female interlocutor as *no-ka* ('no-doing').

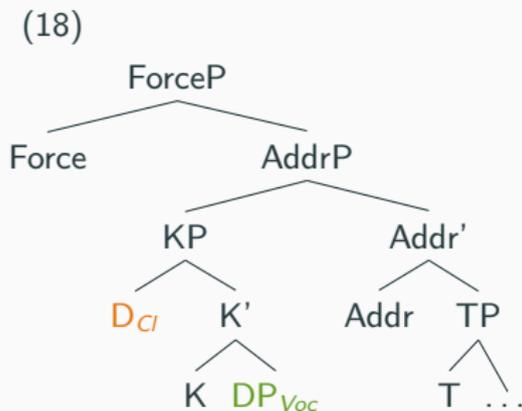
# Basque vocatives

- A final way in Basque suggests a representational relationship between vocatives comes from clitic doubling. Thematic person clitics can always optionally co-occur with an overt DP (Ortiz de Urbina, 1989; Laka, 1990, 1993; Arregi and Nevins, 2012).

(17) (Txo), (ni) etorr-i na-u-k.  
2SG.FAM.MASC 1SG see-PERF 1SG-ROOT-2SG.FAM.MASC  
'I have come.'

- Allocutive clitics may co-refer only with vocative expressions. That is, vocative DPs are correlates of the thematic free nominals “doubled” by the clitics in (18).
- Otherwise allocutive clitics would seem to be exceptional in disallowing an overt DP associate.

- Building on similar proposals in Slocum (2016) and Portner et al. (2019), Haddican and Etxeberria (to appear) take vocatives to be introduced in the same projection, AddrP.
- The clitic and DP associate are introduced in a big DP structure of category K (Uriagereka, 1995; Nevins, 2011).



## Some predictions

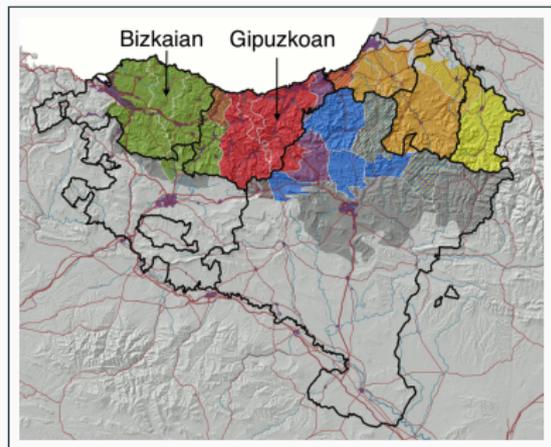
- The literature just discussed leads to the following expectations about the distribution of embedded allocutivity, none of which has been addressed with controlled data.
  - i. Embedded vocatives should be available for the same sets of speakers for which embedded allocutives are available.
  - ii. An age effect, with younger speakers favoring embedded allocutivity.
  - iii. No effect of embedding type on availability of embedded allocutives.
- We report on a judgment and production study intended to address these.

### **3. A judgment and production study**

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# Participants

- 421 self-reported allocutive users, recruited via Twitter, email, etc.
- By gender: 3 non-binary; 156 women, 261 men, 1 no response.
- Ages: 18-71,  $M=41.3$ .
- Participants mainly from western dialects (Gipuzkoan & Bizkaian) with the largest populations of allocutive users.



**Figure 3:** Bizkaian & Gipuzkoan (Zuazo, 2008).

## Materials & procedure

- Participants completed three tasks:
  - i. Spanish-to-Basque translation task (Azkue Ibarbia, 1998).
  - ii. Judgment task.
  - iii. Demographic
- The demographic questionnaire focused on participant age, gender, hometown and context of acquisition of allocutive forms, e.g. home, neighborhood, school, etc.
- Participants completed the survey remotely via an application hosted on PClbex farm (Zehr and Schwarz, 2018).
- Data gathered in 2020 and 2021.

# Judgment survey

- The judgment subdesign consisted of two simple experiments with vocative/allocutive morphemes in root vs. embedded contexts, in matched lexicalizations.
- Participants were assigned to one of two counterbalanced lists with two unique lexicalization/condition.
- Eight fillers/participant (half good, half bad).

Ikusiko dugu ea astelehenean, motel, argazkiak bidaliko dituzten.

(Gaizki)        (Ondo)

*Teklak erabili ditzakezu edo click egin zenbakian.*

**Figure 4:** Example trial, judgment subdesign.

(19) *Example lexicalization, vocative comparison*

- a. **Motel**, ikusiko dugu [ea astelehenean argazkiak bidaliko dituzten].  
Dude, see.FUT AUX if on.Monday photos send.FUT AUX  
'Dude, we'll see if they'll send the photos on Monday.' [Root]
- b. Ikusiko dugu [ea astelehenean, **motel**, argazkiak bidaliko dituzten].  
[Embedded]

(20) *Example lexicalization, allocutive comparison*

- a. Jonek pentsatzen di-**k** [etorriko d-ela].  
Jon think AUX-2SG.FAM.MASC come.FUT AUX-C  
'Jon thinks he'll come.' [Root]
- b. Jonek pentsatzen di-**k** [etorriko du-**k**-ela]. [Embedded]

# Translation task

## (21) *Translation task items* (Spanish versions in appendix)

- i. Maia said she would come. [say complement]
- ii. I told you that we would give him a hug. [say complement]
- iii. Ramon forgot that he has to work. [factive complement]
- iv. The houses we saw are pretty. [relative]
- v. Do you know if Aitor will come? [embedded *yes/no*-question]
- vi. I don't know who will win. [embedded *wh*-question]
- vii. Ander smiled when he saw me. [temporal clause]
- viii. When Miren arrives, we'll start. [temporal clause]
- ix. I'm leaving because it's late [because-clause]
- x. If it's very expensive, we won't buy it. [*if*-clause]

## Judgment task results

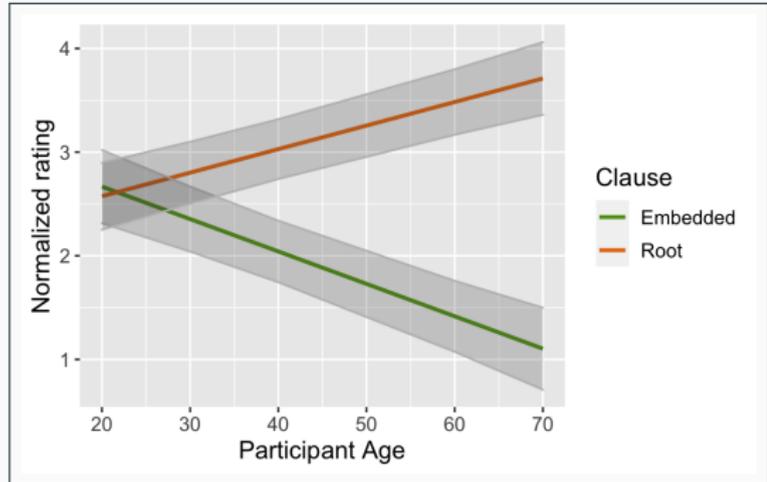
- No significant effect of embedded vocative ratings.
- Effects for participant age and parent input.

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	3.08	0.49	26.71	6.30	0.000
Embedded voc. score	-0.03	0.07	405.78	-0.41	0.683
Root clause	-0.88	0.54	404.46	-1.63	0.103
Age	-0.03	0.01	405.15	-3.45	0.001
Parent allocutive input	0.50	0.23	404.47	2.20	0.029
Voc. score:Root clause	0.11	0.10	404.50	1.19	0.235
Root:Age	0.05	0.01	404.20	4.45	0.000
Root:Parent input	-0.66	0.30	403.87	-2.17	0.031

**Table 1:** Summary of a linear mixed effects model of allocutive sentence ratings in judgement task, with by-participant random slope and correlated intercept for clause and random by-item random intercept. N=409, Observations=1636. Reference levels *Embedded* for clausal context and *No* for Parent input. Participants from Northern dialects excluded.

# Age effects

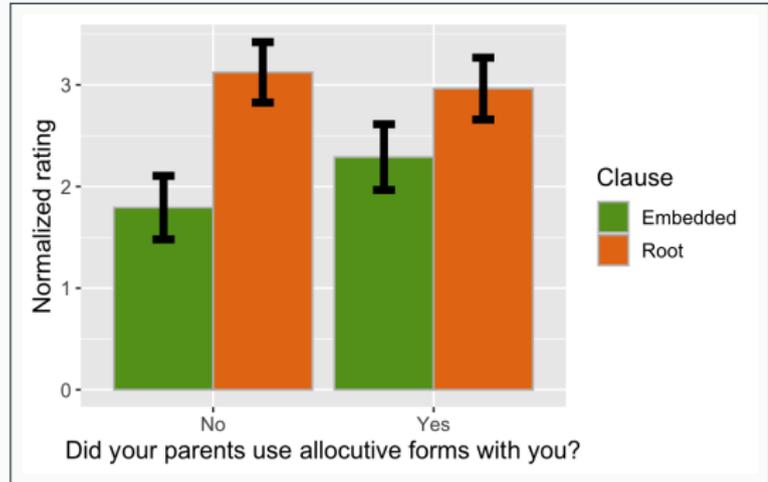
- Evidence for change in progress from judgment data.
- Concomitant decrease in root-only marking.



**Figure 5:** Model estimates for Participant age:Clause.

# Parent input

- Participants reporting parent allocutive exposure show **greater** acceptance of embedded allocutive forms.
- This suggests that the change is not related to insufficient input.



**Figure 6:** Model estimates for Parent input:Clause.

## Translation task results

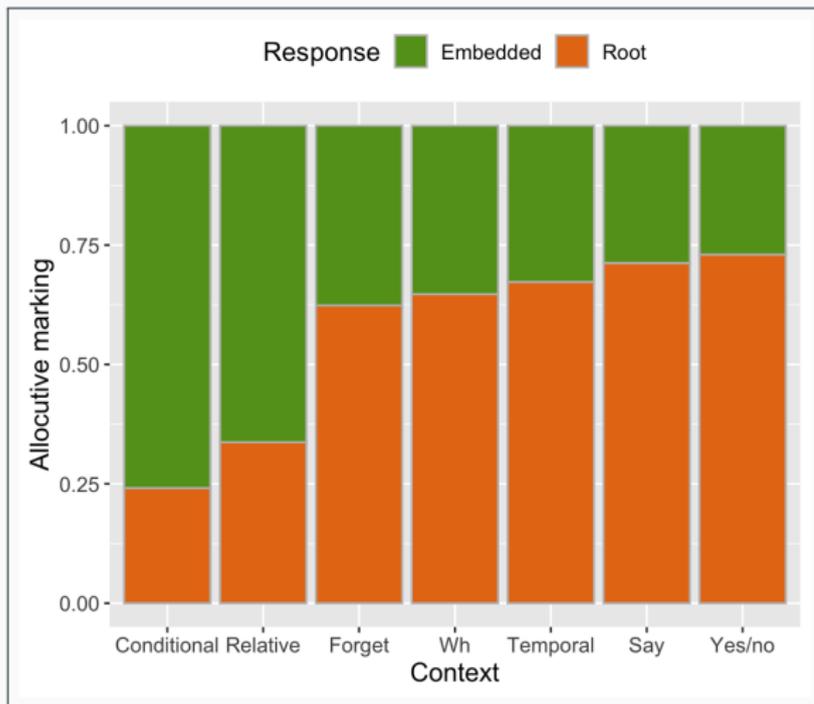
- Again, no significant effect of embedded vocative ratings.

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	3.19	0.58	5.54	0.000
Conditional	1.83	0.58	3.17	0.002
Other clauses	-3.21	0.43	-7.42	0.000
Embedded voc. score	-0.05	0.14	-0.40	0.693
Age	-0.09	0.01	-7.22	0.000
Masculine	0.91	0.18	5.07	0.000
Conditional:Voc	-0.21	0.16	-1.32	0.189
Other clauses:Voc	0.09	0.12	0.71	0.476

**Table 2:** Summary of a generalized linear mixed effects model predicting **embedded allocutive responses** in translation task, with by-participant random intercept. N=399, Observations=2948. Reference levels *Feminine* for gender and *Relative* for Sentence type. Participants from Northern dialects excluded.

# Embedding type effects

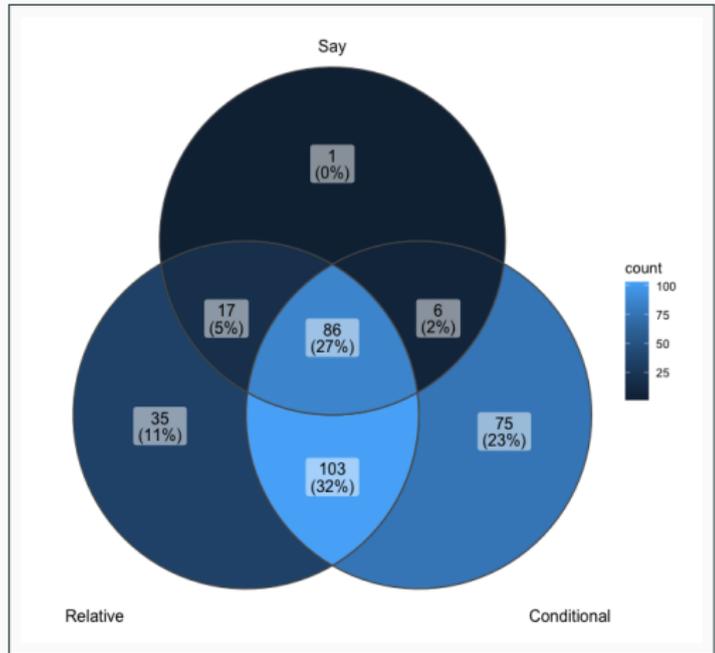
- Embedded responses favored in *if*-clauses, and relatives contra Haddican and Etxeberria (to appear).



**Figure 7:** Translation task responses by context.

# Implicational relationship among grammars

- Participants used allocutive marking in embedded non-‘if’-clauses if they used marking in ‘if’-clauses, but not vice-versa.
- This suggests a hierarchy of contexts:



**Figure 8:** Distribution of embedded allocutive responses pattern by context

(22) Root decl. » Root Q. » *If*-clauses » Relatives » Other finite embeddings

## Two problems

- We focus on two questions posed by these results:
  - i. What accounts for the hierarchy of contexts in (22)?
  - ii. Why is there no correlation between embedded vocative scores and embedded allocutive judgments/production?

## Two problems

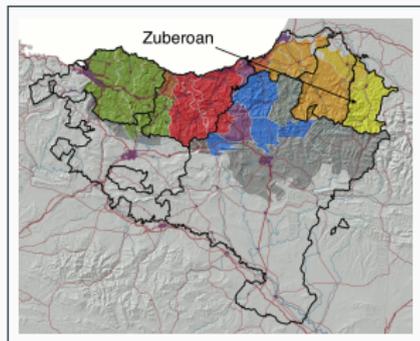
- We focus on two questions posed by these results:
  - i. What accounts for the hierarchy of contexts in (22)?
  - ii. Why is there no correlation between embedded vocative scores and embedded allocutive judgments/production?
- We'll begin with the first of these problems, which extends an analysis proposed in Alok and Haddican (2022). Recall from earlier, the geographic correlates for part of the hierarchy:

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Zuberoan:	Root declaratives only
Conserv. S. Basque:	All finite root clauses
Innov. S. Basque:	All finite clauses

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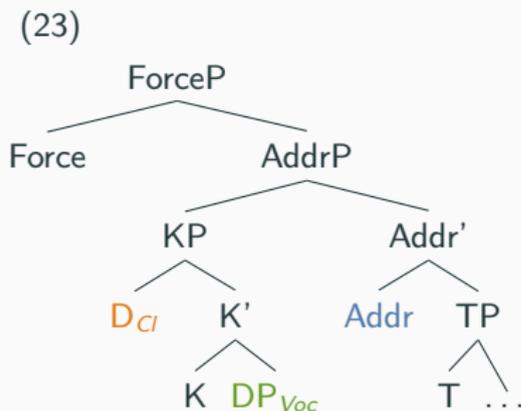
**Table 3:** Geographic correlates of embedding restrictions.



**Figure 9:** Zuberoan.

## Problem 1: The inventory of grammars

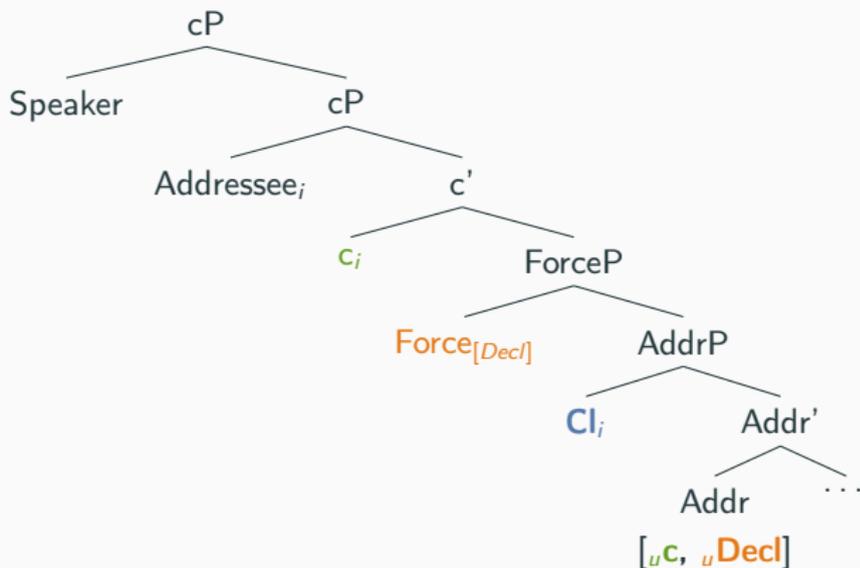
- Importantly there is no evidence for different loci of allocutive morphemes across these dialects.
- These embedding effects suggest no correlates with participation in movement, intervention effects or differences in phase-hood.
- We propose, rather, that Addr—an applicative head—is licensed differently across these dialects.



## Problem 1: The inventory of grammars

- In Zuberoan, Addr is licensed only in the local domain of Force and a speech-act anchoring *c* head, available only in root contexts (Portner et al., 2019).

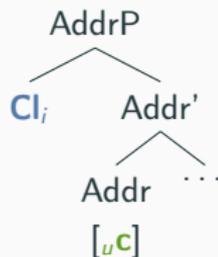
(24) *Zuberoan*



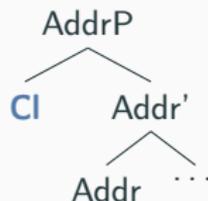
## Problem 1: The inventory of grammars

- Conservative southern dialects differ minimally in lacking Force licensing as in (25).
- Innovative southern varieties lack both restrictions (26), with the consequence that allocutive clitics are possible in all finite contexts.

(25) *Conserv. S. Basque*

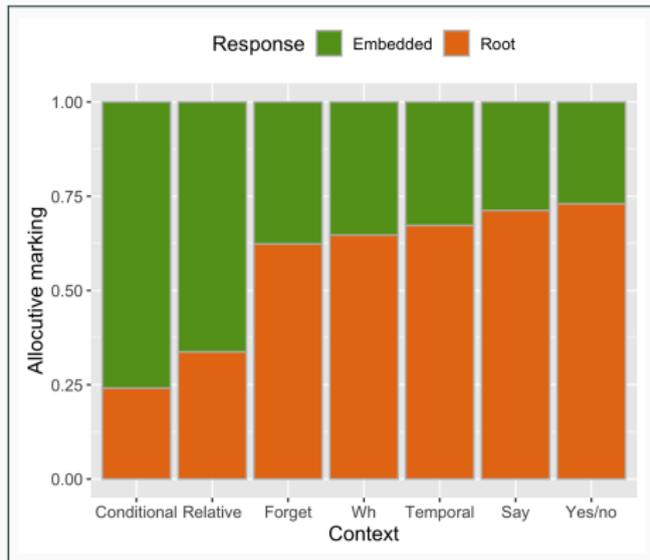


(26) *Innov. S. Basque*



# Embedding type effects

- From this perspective, it's noteworthy that one thing that distinguishes contexts leading the change (*if-clauses*) from conservative contexts (*complement clauses*) is a higher position of external merge with the root clause (at least for protasis-initial orders) (Haegeman, 2003; Bhatt and Pancheva, 2006).



**Figure 10:** Translation task responses by context.

## Problem 1: The inventory of grammars

- *If*-clauses in Basque, like English, are incompatible with speaker/hearer oriented adverbs, which Haegeman (2010) took to reflect intervention of the adverb in movement of a Speech Act operator.

(27) \*Op if frankly he's \_\_\_ unable to cope, we'll have to replace him.  

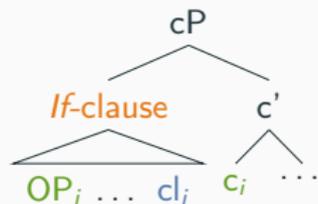

(Adapted from Haegeman (2010))

(28) \*Egoera (benetan) ezin badu (benetan) jasan, ordezkatu egin  
situation frankly can't IF.AUX frankly handle, replace do  
beharko dugu.  
need.FUT AUX  
'If they can't handle the situation, we'll have to replace them.'

## Problem 1: The inventory of grammars

- Assume, following Haegeman (2010) and Bhatt and Pancheva (2006), that *if*-clauses contain a World operator that moves to a Speech-Act Phrase. Assume, further that this is bound by the matrix little-*c*.
- We propose, in this light, that the innovation leading to the availability allocutive marking in *if*-clauses in semi-conservative grammars, is licensing of the clitic-hosting Addr by the World operator.
- We set aside the question of whether a similar approach might extend to relative clauses.

(29) *If-clauses*



## Problem 2: The non-correlation of allocutives & vocatives

- Vocative DPs must be set off from surrounding material by a prosodic break, and appear in a position separate from the verb hosting the allocutive clitic.
- In the presence of foci, these distribute like topics—appearing either to the left of foci or finally.

(30) (Bihotza) # BIHAR etorriko nau-k-ela (bihotza)  
heart tomorrow come.FUT AUX-2SG.FAM.MASC-C honey  
'Honey (I said that) I will come TOMORROW.'

## Problem 2: The non-correlation of allocutives & vocatives

- We suggest that contexts like (31) are compatible with two different grammars—one with a vocative introduced an embedded AddrP, and one with topicalization of embedded clause material to a position above the remnant vocative introduced in the root clause (Slocum, 2016).

(31) [Ikusiko dugu ea astelehenean]<sub>k</sub> motel, t<sub>k</sub> argazkiak bidaliko dituzten.  
see.FUT AUX if on.Monday dude photos send.FUT AUX  
'Dude, we'll see if they'll send the photos on Monday.'

- The absence of the targeted cross-speaker correlation, may reflect in part the presence of this second grammatical option, which we have not controlled.

## 6. Summary

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# Summary

- Main outcomes:
  - i. Embedded allocutivity readily accepted in judgment data and frequent in translation task data.
  - ii. Judgment and production data both suggest change in progress toward embedded allocutive grammars.
  - iii. No cross-speaker correlation in acceptance of embedded allocutives and embedded direct addresses contra Haddican and Etxeberria (to appear).
  - iv. Embedded allocutivity favored in *if*-clauses and relatives, contra Haddican and Etxeberria (to appear).
  - v. We model the inventory of grammars in terms of different ways in which the head introducing allocutive clitics (Addr) is licensed.

# Thanks

- Study participants
- Beñat Oyharçabal
- DiGS 23 organizers (who are doing an amazing job)

## References

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# References

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- Akkuş, F., Hill, V., 2021. Overt speakers in syntax. *Glossa* 6.
- Alok, D., 2020. Speaker and Addressee in Natural Language: Honorificity, Indexicality and their Interaction in Magahi. Ph.D. thesis, Rutgers.
- Alok, D., 2021. The morphosyntax of Magahi addressee agreement. *Syntax* 24, 263–296.
- Alok, D., Baker, M., 2018. On the mechanics (syntax) of indexical shift: Evidence from allocutive agreement in Magahi, MS. Rutgers.
- Alok, D., Haddican, B., 2022. The formal heterogeneity of allocutivity, (under rev.).
- Álvarez Blanco, R., 1997. O complemento de solidariedade: a complicitude entre os interlocutores. In: Fernández Salgado, B. (Ed.), *Actas do IV Congreso Internacional de Estudos Galegos*. Centre for Galician Studies, pp. 37–53.
- Arregi, K., Nevins, A., 2012. *Morphotactics: Basque auxiliaries and the structure of spellout*, vol. 86. Springer, Dordrecht.

- Artiagoitia, X., 2003. Adjunct subordination. In: Hualde, J. I., Ortiz de Urbina, J. (Eds.), *A grammar of Basque*. Walter de Gruyter, Berlin, pp. 710–762.
- Aurrekoetxea, G., 1994. Hitanoa ahozko hizkuntza (Euskal Herriko Hizkuntza Atlasaren arabera). *Euskera* 39, 995–1009.
- Azkue, M. R., 1923. *Morfología vasca (Gramática básica dialectal del Euskera)*. Editorial La Gran Enciclopedia Vasca, Bilbao, 2 edn.
- Azkue Ibarbia, X., 1998. *Hitanoa Zumaian*. Zumaiaiko Udala.
- Bhatt, R., Pancheva, R., 2006. Conditionals. In: M., E., van Riemsdijk H (Eds.), *The Blackwell companion to syntax*.
- Elordieta, A., Haddican, B., 2018. Truncation feeds intervention: Two clause-type effects in Basque. *Natural Language & Linguistic Theory* 36, 403–443.
- Ettxepare, R., 2003. Negation. In: Hualde, J. I., Ortiz de Urbina, J. (Eds.), *A grammar of Basque*. Walter de Gruyter, Berlin, pp. 564–571.
- Euskaltzaindia, 2008. *Euskararen Herri Hizkeren Atlas*. Euskaltzaindia, Bilbao.
- Haddican, B., 2019. Toward a unified syntax of Addressee in C: Evidence from Galician solidarity datives. *Revue Roumaine de Linguistique* 64, 373–386.
- Haddican, B., Etxeberria, U., to appear. Embedded allocutivity in Basque. *Syntax* .

- Haegeman, L., 2003. Conditional clauses: External and internal syntax. *Mind & Language* 18, 317–339.
- Haegeman, L., 2010. The internal syntax of adverbial clauses. *Lingua* 120, 628–648.
- Hill, V., 2007. Vocatives and the pragmatics–syntax interface. *Lingua* 117, 2077–2105.
- Hill, V., 2013. *Vocatives: How syntax meets with pragmatics*. Brill.
- Hualde, J. I., Oyarçabal, B., Ortiz de Urbina, J., 2003. Verbs. In: Hualde, J. I., Ortiz de Urbina, J. (Eds.), *A grammar of Basque*. Walter de Gruyter, Berlin, pp. 201–323.
- Kaur, G., 2020. On the syntax of addressee in imperatives: insights from allocutivity. *Glossa: a journal of general linguistics* 5, 1–44.
- Kaur, G., Yamada, A., 2019. Embedded allocutivity and its reference. Handout at Person and Perspective workshop, May 4, 2019.
- Laka, I., 1990. Negation in syntax, on the nature of functional categories and projections. Ph.D. thesis, Massachusetts Institute of Technology, Dept. of Linguistics and Philosophy.

- Laka, I., 1993. The structure of inflection: A case study in  $X^0$  syntax. In: Hualde, J. I., de Urbina, J. O. (Eds.), *Generative studies in Basque linguistics*. John Benjamins, Amsterdam/Philadelphia, pp. 21–70.
- McFadden, T., 2020. The morphosyntax of allocutive agreement in Tamil. In: Smith, P. W., Mursell, J., Hartmann, K. (Eds.), *Agree to Agree: Agreement in the Minimalist Programme*. Language Science Press, Berlin.
- Nevins, A., 2011. Multiple agree with clitics: Person complementarity vs. omnivorous number. *Natural Language & Linguistic Theory* 29, 939–971.
- Ortiz de Urbina, J., 1989. *Some Parameters in the Grammar of Basque*. Foris Publications, Dordrecht.
- Oyharçabal, B., 1993. Verb agreement with non arguments: On allocutive agreement. In: Hualde, J. I., Ortiz de Urbina, J. (Eds.), *Generative Studies in Basque Linguistics*. John Benjamins, Philadelphia/Amsterdam, pp. 89–89.
- Portner, P., Pak, M., Zanuttini, R., 2019. The addressee at the syntax-semantics interface: Evidence from politeness and speech style. vol. 95. *Language*.
- Slocum, P., 2016. *The Syntax of Address*. Ph.D. thesis, State University of New York at Stony Brook.

- Sundaresan, S., 2018. An alternative model of indexical shift: Variation and selection without context-overwriting, Ms. University of Leipzig.
- Uriagereka, J., 1995. Aspects of the syntax of clitic placement in Western Romance. *Linguistic Inquiry* 26, 79–123.
- Zehr, J., Schwarz, F., 2018. Penncontroller for internet based experiments (IBEX). <https://doi.org/10.17605/OSF.IO/MD832> .
- Zuazo, K., 2008. *Euskalkiak: Euskararen Dialektoak*. Elkar, Donostia.

# Appendix

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## (32) *Translation task items, Spanish*

- |  |                                    |
|--|------------------------------------|
| i. Maia ha dicho que vendrá.                   | [say complement]                   |
| ii. Te he dicho que le daremos un abrazo.      | [say complement]                   |
| iii. Ramón ha olvidado que tiene que trabajar. | [factive complement]               |
| iv. Las casas que hemos visto son bonitas.     | [relative]                         |
| v. Sabes si Aitor vendrá?                      | [embedded <i>yes/no</i> -question] |
| vi. No se quién va a ganar.                    | [embedded <i>wh</i> -question]     |
| vii. Ander sonrió cuando me vió.               | [temporal clause]                  |
| viii. Cuando llegue Miren, empezaremos.        | [temporal clause]                  |
| ix. Me voy porque es tarde.                    | [ <i>because</i> -clause]          |
| x. Si es muy caro, no lo compraremos.          | [ <i>if</i> -clause]               |

# Regional effects

- Geographic patterning aligns with anecdotal reports that innovative variants are favored in Gipuzkoan varieties.

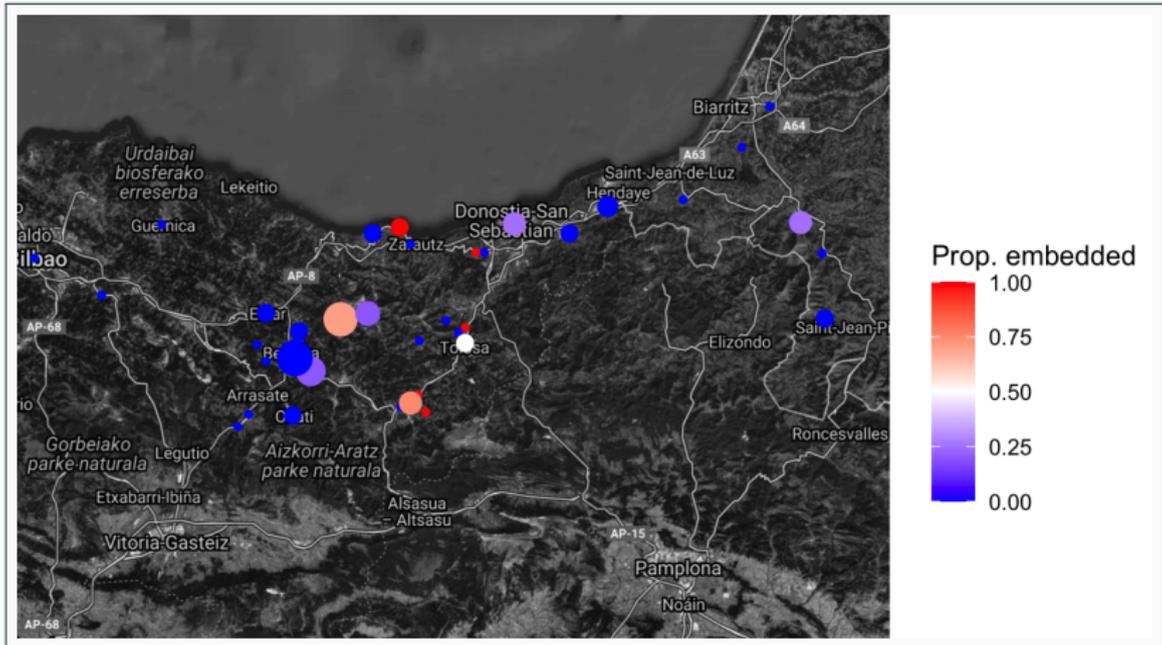


Figure 11: Translation responses for say complements by participant