Externalization and morphosyntactic parameters in Basque

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Introduction

- Basque has interesting morphosyntactic properties:
  - Head-finality
  - Agglutinativity
  - Productive/recursive compounding
    (Duguine, Irurtzun & Boeckx 2017)
- In generative grammar, these properties have been discussed in terms of parameters:
  - head-directionality parameter
  - the Compounding Parameter (Snyder 2001).
- In the minimalist program (Chomsky 1995 et seq.), it is argued that the head directionality is an externalization parameter, whose properties has not been much discussed.

Goal

- In this paper, I will argue that these morphosyntactic properties can be attributed to a prosodic property of Basque, the left-edge stress (i.e. stress on the initial or the second syllable of a word).
- Left-edge stress
  ⇩
  - head-finality
    ⇩
  - agglutinativity
  - recursive compounding

Roadmap

1. Morphosyntactic parameters in Basque
2. Basque prosody
3. Deriving morphosyntactic parameters from prosody
4. Phonological variation and morphosyntactic uniformity
5. Conclusion

1. Morphosyntactic parameters in Basque

1.1 Head finality (WALS)

26A	Equal prefixing and suffixing
83A	OV
85A	Postpositions
86A	Genitive-Noun
87A	Noun-Adjective
88A	Noun-Demonstrative (DP or NP)
89A	Numeral-Noun (NP or NumP)
90A	Relative clause-Noun
91A	Degree word-Adjective
92A	Other position [Polar Question Particles]
94A	Final subordinator word

1.2 Agglutinativity

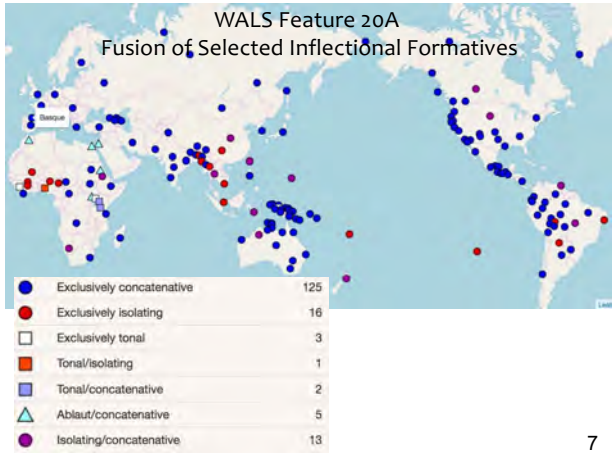
- Postpositional phrases

(1) *mendi-a-n*
mountain-Def-Loc
'in the mountain'

- Plural inflected nominal phrases

(2) *mendi-e-k*
mountain-Pl-Erg
'the mountains' (Ergative)
Manterola (2008: 3)

- WALS Feature 20A:
  Fusion of Selected Inflectional Formatives
  Basque: Exclusively concatenative



Fusion of Selected Inflectional Formatives

Isolating formatives are full-fledged phonological words of their own.

- In Fijian, all formatives with more than one mora are isolating.

(1) Past tense formative *aa* in Boumaa Fijian (Dixon 1988:53)
Au aa soli-a a=niu vei ira.
1SG PST give-TR ART=coconut to 3PL
'I gave the coconut to them.'

Concatenative formatives are phonologically bound. They need some other host word for their pronunciation.

- The past tense marker *ti* of Turkish
  git-ti 'go-past'
  yap-tı 'do-past' unrounded back V and a voiceless C
  gel-di 'come-past' unrounded front V and a voiced C.

1.3 Compounding

(1) N+N compounding
  a. *liburu-saltzaile* 'book-seller'
  b. *haize-errota* 'windmill'
  c. *behi-esnea* 'cow-milk'
  d. *esne-behia* 'milk-cow'
  e. *oliba-olio* 'olive oil'
  (Duguine, Irurtzun & Boeckx 2017: 462)

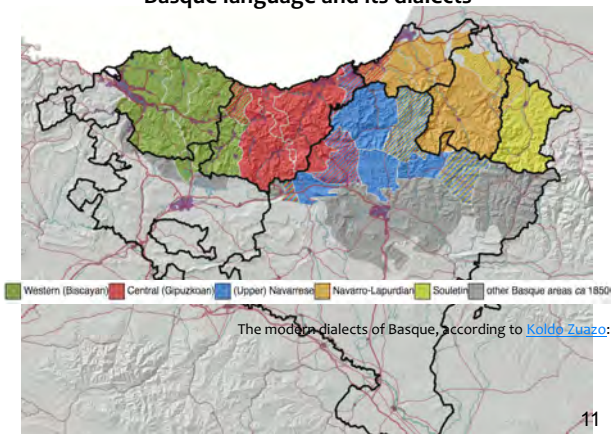
(2) Recursive compounding
  a. *albistari-saltzaile bilera*
  news vendors meeting
  'newspaper vendors' conference'
  b. *jan-gela mahai-a*
  eat-room table-ABS
  'the dining room table'
  Saltarelli (1988: 226)

2. Basque prosody

2.1 Basque accentuation

- Hualde (1999)
- "The accentual systems found in Basque varieties range from some rather complex systems, including some of the pitch-accent type, to others with limited accentual oppositions, to yet others where words never contrast by their accentual pattern."

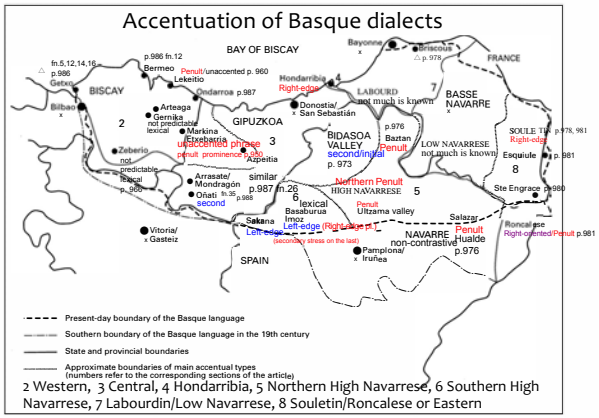
Basque language and its dialects



The modern dialects of Basque, according to Koldo Zuazo:

- "… a **Western** type, where a crucial distinction is made between accented and unaccented words."
- "… the **Central** type, where the accent generally falls on the second syllable, except in some marked cases, where it falls on the initial syllable."
- "… the **Hondarribia/Old Labourdin** system, in which accent is computed counting from the right edge of the stem."
- "In most of the territory of **High Navarrese, Low Navarrese and Labourdin dialects**, as well as in some small areas of Gipuzkoan and Biscayan speech, accentuation is not phonologically distinctive."
- in the easternmost Basque dialect, **Souletin**, the accent falls on the penultimate syllable of the word in the unmarked case, and on the final in exceptional cases.

Accentuation of Basque dialects



2 Western, 3 Central, 4 Hondarribia, 5 Northern High Navarrese, 6 Southern High Navarrese, 7 Labourdin/Low Navarrese, 8 Souletin/Roncalese or Eastern

Map 1. Basque speaking area of Spain and France

Stress location in Basque dialects (WALS)

Name	14A Fixed Stress	15A Weight-Sensitive Stress	16A Weight Factors
Basque (Zeberio)	1 No fixed stress	7 Not predictable	6 Lexical stress
Basque (Gernica)	1 No fixed stress	7 Not predictable	6 Lexical stress
Basque (Lekeitio)	6 Penultimate	8 Fixed stress (no weight-sensitivity)	1 No weight
Basque (Oñati)	3 Second	8 Fixed stress (no weight-sensitivity)	1 No weight
Basque (Sakana)	2 Initial	8 Fixed stress (no weight-sensitivity)	1 No weight
Basque (Basaburua and Imoz)	1 No fixed stress	1 Left-edge: First or second	6 Lexical stress
Basque (Bidasoa Valley)	3 Second	8 Fixed stress (no weight-sensitivity)	1 No weight
Basque (Hondarribia)	1 No fixed stress	3 Right-edge: Ultimate or penultimate	3 Coda consonant
Basque (Northern High Navarrese)	6 Penultimate	8 Fixed stress (no weight-sensitivity)	1 No weight
Basque (Souletin)	1 No fixed stress	3 Right-edge: Ultimate or penultimate	6 Lexical stress
Basque (Roncalese)	6 Penultimate	8 Fixed stress (no weight-sensitivity)	1 No weight

2.2 The Ancient Basque accentual system

- Stress fell on the initial syllable of the word (Martinet 1950, 1955). Aspiration: *khaka*/**kakha*
- Stress was normally assigned to the second syllable (Michelena 1958, 1977). The aspiration does not normally fall later than the second syllable.
- A regular word-final accent (Hualde 1993, 1995). The accentual facts of the western dialects.
- "Each proposals has certain advantages and certain drawbacks." (Trask 1997: 166)
- Blevins (2018)

2.3 Historical process of accent shift

- "In some varieties within this area [Northern Biscayan], a historical process of accent shift has retracted the accent one syllable to the left in some specific contexts. This historical shift is apparent in the treatment of borrowings, Sp. *tomáte* > *tómate* 'tomato'." (Hualde 1999: 958)
- "Historical accent shifts have also taken place in the opposite direction. A particularly radical process of accent shift has taken place in the variety spoken in the town of Lekeitio and some neighboring areas. In this variety, all lexical accents have shifted to the penultimate syllable of the word, causing a complete restructuring of the system. " (Hualde 1999: 960)

2.4 Prosody in Western Basque and Tokyo Japanese

- The western dialects of Basque and Tokyo Japanese (Selkirk and Elordieta 2010)
- Both have a distinction between lexically accented and unaccented words.
- In both, lexically accented words show a single culminative pitch accent in the surface representation: ω(… H*L …)ω
- In both, the distribution of a word-initial LH rise diagnoses the presence of the left edge of a phonological phrase (φ): φ(LH- …..)φ
- Basque and Japanese have a wide dialectal variation in the accent/stress system.

2.5 Japanese word prosody

- Traditional **one-accent model** for Japanese defines a pitch fall as the accent in accented words.
- **Stress & Pitch model** (Tokizaki 2019, cf. Duanmu 2008): Japanese words has strength at the initial mora (and a pitch-fall accent on a (ante-)penultimate mora in accented words.

	one-**accent'**	**STRESS** & Pitch'	gloss
a.	**ma'**kura-ga	**MA'**kura-ga	'pillow-Nom'
b.	ta**ma'**go-ga	**TA**ma'go-ga	'egg-Nom'
c.	ata**ma'**-ga	**A**tama'-ga	'head-Nom'
d.	sakana-ga	**SA**kana-ga	'fish-Nom'

3. Deriving morphosyntactic parameters from prosody

3.1 Deriving head-finality from left-edge word stress

- The original word-accent location in Basque: initial or second (left-edge stress).
- The parallelism of stress location between words and phrases (cf. Plank 1998)
- Stress assignment to the deepest element in a structure (Cinque 1993): [X [Y [.. **Z** ..]]] / [[[.. **X** ..] Y] Z]
- At Externalization, languages with left-hand stress choose head-final structure
- [[$_{Complement}$ .. **X** ..] Head] (X: the deepest element)
- *[Head [$_{Complement}$ .. **X** ..]]

3.2 Deriving agglutinativity and productive/recursive compounding from head-finality

- When an asymmetric structure is Externalized as a head-final order, the head and the complement are closely tied together.
- [[$_{Complement}$ .. **X** ..]-Head] (a phonological compound w)
- [Head [$_{Complement}$ .. **X** ..]] (a phrase)
- *nise tanuki shiru*
  mock badger soup
- [[*nise* ***d****anuki*] ***j****iru*] mock-badger soup
- [*nise* [*tanuki* ***j****iru*]] mock badger-soup

4. Phonological variation and morphosyntactic uniformity

- Why do Basque dialects have variation in word-stress location while they have the same morphosyntax?
- The original stress location set the value of morphosyntactic parameter as head-final.
- The value of morphosyntactic parameter is hard to change even if the stress location changes from left-edge to right-edge in some dialects through the contact with Romance languages.
- Change in word-stress location is not apparent.
- The penultimate stress in a two-syllable word equals the initial stress: [$_{Word}$ **σ** σ] (pen = second in [$_{Word}$ σ **σ** σ])
- Or …

4. Phonological variation and morphosyntactic uniformity

- Why do Basque dialects have variation in word-stress location while they have the same morphosyntax?
- The original stress location set the value of morphosyntactic parameter as head-final.
- Basque dialects have kept the original word prosody,

  Left-edge stress (and right-hand pitch accent),

  which gives head-final word order, agglutinativity and productive/recursive compounding

  just as Japanese dialects.

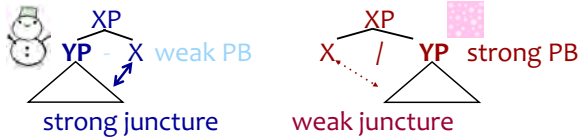
Conclusion

- Morphosyntactic properties such as head-finality, agglutinativity and productive/recursive compounding can be attributed to a prosodic property of (Proto-) Basque, the left-edge stress (i.e. stress on the initial or the second syllable of a word).
- The study of Basque language and its dialects sheds light on a theoretical typology and the minimalist approach to linguistic theory, which tries to ascribe the variation of languages to Externalization (Chomsky 2017).

Laying a Calder's mobile on the desk

- Linearization is to lay a Calder's mobile on a desk, whose shape has variation.
- Linearization is to lay an asymmetric structure on the phonological template of the language, which has variation.

Head directionality, juncture and stress



- Complement-Head [$_{XP}$ **YP**-X] is tight like a word
- Head Complement [$_{XP}$ X **YP**] is loose as a phrase
- Stress falls on the bottom element, i.e. an element in complement, not head (Cinque 1993).
- Left-hand word stress [$_{X}$ ó..σ] matches [$_{XP}$ **YP**-X] (**C**-H order) (e.g. wáste disposal plan).
- Right-hand word stress [$_{X}$ σ..ó] does not match [$_{XP}$ **YP**-X] (**C**-H order), giving [$_{XP}$ [$_{X}$ σ..ó] [$_{YP}$ σ … **ó**]] (H-**C** order) (e.g. to the státion).

Head-complement order

World Atlas of Language Structure Online (wals.info) (Dryer 2005, 2013: #26, 83, 85, 86, 94)

	Complement-Head	Head-Complement
a.	Stem-Suffix	Prefix-Stem
	debt-or	*m-wia* (Swahili)
b.	Genitive-Noun	Noun-Genitive
	Kukku's mother	*nìimò ma-Kùkkú* (Krongo)
c.	NP-Postposition	Prepostion-NP
	huoneese-en (Finnish)	*into rooms*
d.	Object-Verb	Verb-Object
	boeken lezen (Dutch)	*read books*
e.	Clause-Subordinator	Subordinator-Clause
	ane-ga itta tokoro (Jap)	*when my sister said*

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