

Obscuring morphomic patterns: some evidence from Catalan verbal inflection

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1. Introduction

1.1. Introduction

- During the Middle Ages, a **new verb class** was formed within **Catalan 2nd conjugation**, characterized by the presence of a **velar augment** (/g/ or /sk/) at certain cells of the paradigm (Pérez Saldanya 1998; Wheeler 2011; Badal 2021).
- The distribution of the velar can be considered “**morphomic**” (in Aronoff’s 1994 terms).
- The systematic appearance of this augment “cannot be aligned with any conceivable coherent semantic, syntactic, or phonological generalization” (Esher and O’Neill 2022: 351).

		<i>beure</i> ‘to drink’ /g/	<i>créixer</i> ‘to grow’ /sk/
L-pattern	1SG present indicative	<i>bec</i> ['bek]	<i>cresc</i> ['kres k]
	Present subjunctive	3SG <i>bega</i> ['be y a]	3SG <i>cresca</i> ['kres k a]
PYTA	Preterite	3SG <i>begué</i> [be' y e]	3SG <i>cresqué</i> [kres' k e]
	Conditional	3SG <i>beguera</i> [be' y era]	3SG <i>cresquera</i> [kres' k era]
	Imperfect subjunctive	3SG <i>begués</i> [be' y es]	3SG <i>cresqués</i> [kres' k es]
Past participle (except root-stressed forms, like <i>dit</i> , <i>pres</i>)		<i>begut</i> [be' y ut]	<i>crescut</i> [kres' k ut]

1.1. Introduction

- The distribution of the velar augment is the result of a **diachronic change**, which led to the “**coalescence**” (in Maiden’s 2018: 292 terms) of the L and PYTA morphomic patterns.
- There are certain verbs that did not fully adopt this velar distribution pattern: *haver* ‘to haver’, *ser* ‘to be’ and *voler* ‘to want’.

1.2. Goals

- Test whether a “coherence” effect took place in the diachronic change of these verbs, as follows from Maiden’s (2018: 3) prediction.
- If the two **morphemes** are **psychologically real** for speakers (Maiden 2018: 13), all the forms associated to them must undergo the same analogical change.

Outline of the talk

1. Introduction
2. Data and methodology
3. The verb *haver* 'to have'
4. The verb *ser* 'to be'
5. The verb *voler* 'to want'
6. Conclusions

2. Methodology

Data and methodology

- **Corpus** comprising **Catalan works** ranging from the 13th to the 19th century.
- To elucidate whether the distribution of the non-velarized and velarized forms (variable 'velarized') in relation to the centuries (variable 'century') is random or not, we have carried out several **chi-square tests** (IBM Corp. 2019).

3. The verb *haver* 'to have'

Traits

- The verb *haver* 'to have' is one of the **most used Catalan verbs**, mainly as a perfect auxiliary.
- Presents certain **irregularities** in the paradigm, related both to **vowel alternations** in the root in some present indicative forms, and to the presence of a **velar consonant** in the PYTA cells.

Present indicative & present subjunctive of *haver* in old Catalan

	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	HABEŌ > <i>he</i>	HABĒS > <i>has</i>	HABET > <i>ha</i>	HABĒMUS > <i>havem</i>	HABĒTIS > <i>havets</i>	HABENT > <i>han</i>
PRS.SBJV	HABEAM > <i>haja</i>	HABEĀS > <i>hages</i>	HABEAT > <i>haja</i>	HABEĀMUS > <i>hagam</i>	HABEĀTIS > <i>hajats</i>	HABEANT > <i>hagen</i>

PYTA of *haver* in old Catalan

	1SG	2SG	3SG	1PL	2PL	3PL
PRT	<i>hac</i>	<i>haguist</i>	<i>hac</i>	<i>haguem</i>	<i>hagués</i>	<i>hagren</i>
COND	<i>hagra</i>	<i>hagres</i>	<i>hagra</i>	<i>hàgrem</i>	<i>hàgrets</i>	<i>hagren</i>
IPFV.SBJV	<i>hagués</i>	<i>haguesses</i>	<i>hagués</i>	<i>haguéssem</i>	<i>haguéssets</i>	<i>haguessen</i>

Corpus results

- **Present subjunctive**: only some velarized forms are attested, like *haga* [a γ a] 's/he have' instead of *haja* [a $\widehat{d}\zeta$ a] 's/he have', although never become statistically significant ($\chi^2_{(3)} = 4.990$, $p = 0.172$, Cramér's $V = 0.107$).
- **PYTA**: the only tense where changes are observed is the **conditional** ($\chi^2_{(6)} = 112.586$, $p < 0.001$, Cramér's $V = 0.784$), with some non-velarized forms in the 19th century documented in Valencian, like *havera* [a'vera] 's/he would have' instead of *haguera* [a' γ era].

Discussion

- The **high frequency** of this verb probably favored the **preservation of irregular forms** over the centuries (see Anshen & Aronoff 1988; Bybee & Brewer 1980: 218; Rainer 1988).
- The first person of the present indicative could not exert the same force as in other verbs such as *deure* 'to owe', in which /g/ was first introduced into the first-person present indicative and then extended to the present subjunctive.

Discussion

- In **Valencian**, the original forms of the imperfect subjunctive (e.g., *hagués* [a'ɣes] 's/he had') were no longer used, and the preterite had lost much vitality.
- **PYTA** was **blurred**: the only used tense at this time was the old conditional, used then as an imperfect subjunctive.
- The develarization is not yet consolidated and presents dialectal variation: the forms with the velar consonant (e.g., *haguera* [a'ɣera] 's/he would have') are still widely attested.

4. The verb *ser* 'to be'

Traits

- *Ser* 'to be' is one of **most used** and, at the same time, **most irregular** Catalan verbs.
- It has up to six different **suppletive roots**, each of which can present **several allomorphs** with vowel and consonant alternations.

Present indicative & present subjunctive of *ser* in old Catalan

	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	SUM > <i>so</i>	ES > <i>es</i>	EST > <i>és</i>	SUMUS > <i>som</i>	*SUTIS > <i>sots</i>	SUNT > <i>són</i>
PRS.SBJV	*SIAM > <i>sia</i>	*SIAS > <i>sies</i>	*SIAT > <i>sia</i>	*SIAMUS > <i>siam</i>	*SIATIS > <i>siats</i>	*SIANT > <i>sien</i>

PYTA of *ser* in old Catalan

	1SG	2SG	3SG	1PL	2PL	3PL
PRT	<i>fui</i>	<i>fuïst/fost</i>	<i>fo</i> (<i>fon</i> , <i>fou</i>) > <i>fonc</i> ['fonk]	<i>fom</i>	<i>fos</i>	<i>foren</i>
COND	<i>fora</i>	<i>fores</i>	<i>fora</i>	<i>fórem</i>	<i>fórets</i>	<i>foren</i>
IPFV.SBJV	<i>fos</i>	<i>fosses</i>	<i>fos</i>	<i>fóssem</i>	<i>fóssets</i>	<i>fossen</i>

Corpus results

- **First-person present indicative:** the percentage distribution between non-velarized (*so* 'I am') and velarized forms (*so***c** ['so**k**] 'I am') varies notably throughout the studied period ($\chi^2_{(6)} = 244.435, p < 0.001, \text{Cramér's } V = 0.910$).
- **Present subjunctive:** the percentage distribution between non-velarized (e.g., *sia* 's/he be') and velarized forms (e.g., *si***g***a* ['si**y**a] 's/he be') varies significantly over the analyzed centuries ($\chi^2_{(6)} = 3323.054, p < 0.001, \text{Cramér's } V = 0.959$).

Corpus results

- **Third-person preterite:** the percentage distribution between non-velarized (*fo, fon, fou* 's/he was') and velarized forms (*fonc* ['fonk] 's/he was') varies significantly throughout the studied period ($\chi^2_{(6)} = 1251.345, p < 0.001, \text{Cramér's } V = 0.655$).

Discussion (1SG.PRES.IND)

- The **velarization** of the **first-person present indicative** is **quite late**: we must wait until the 19th for the generalization of *so***c** ['so**k**].
- It is a **widely used verb**, also as a perfect auxiliary, which favor the maintenance of etymological forms.

Discussion (PRS.SBJV)

- In the present subjunctive, we must wait until the 18th century to attest velarized forms, and until the 19th century for them to generalize.
- The **analogical velarization** of the present subjunctive aims to **solve morphophonological problems**: the velar consonant allows the hiatus of the etymological forms to be undone: e.g., *si.a* >> *si.g*a ‘s/he be’.

Discussion (3SG.PRT)

- Until the 15th century, the non-velarized forms (*fo*, *fou*, *fon*) are predominant.
- *Fonc* equals the frequency of the non-velarized forms in the 16th century and reaches its peak in the 17th century.
- In the 18th century, the trend is reversed again, and the non-velarized forms become the most common ones.
- The fact that only one form of the preterite presented the velar consonant, while the rest remained unaffected by the analogical change, went **against the morphome coherence**.

5. The verb *voler* 'to want'

Traits

- *Voler* ‘to want’ is a **highly frequent Catalan verb**, partly because it is **normally** used as a **modal verb** and when followed by an infinitive it presents behaviors of auxiliary verbs.
- In modern-day Catalan, it presents significant **dialectal divergences** in the **L-pattern** due to analogical velarization.
- In each variety, a different principle of naturalness prevails (on the hierarchy of naturalness principles, see Mayerthaler 1987: 52).

L-pattern of *voler* in old Catalan

	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	*VOLEO > <i>vull</i>	*VOLES > <i>vols</i>	*VOLET > <i>vol</i>	*VOLEMUS > <i>volem</i>	*VOLETIS > <i>volets</i>	*VOLENT > <i>volen</i>
PRS.SBJV	*VOLEAM > <i>vulla</i>	*VOLEAS > <i>vulles</i>	*VOLEAT > <i>vulla</i>	*VOLEAMUS > <i>vullam</i>	*VOLEATIS > <i>vullats</i>	*VOLEANT > <i>vullen</i>

PYTA of *voler* in old Catalan

	1SG	2SG	3SG	1PL	2PL	3PL
PRT	<i>volc</i>	<i>volguist</i>	<i>volc</i>	<i>volguem</i>	<i>volgués</i>	<i>volgren</i>
COND	<i>volgra</i>	<i>volgres</i>	<i>volgra</i>	<i>vólgrem</i>	<i>vólgrets</i>	<i>volgren</i>
IPFV.SBJV	<i>volgués</i>	<i>volguesses</i>	<i>volgués</i>	<i>volguéssem</i>	<i>volguéssets</i>	<i>volguessen</i>

General Catalan

	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	<i>vull</i>	<i>vols</i>	<i>vol</i>	<i>volem</i>	<i>voleu</i>	<i>volen</i>
PRS.SBJV	<i>vulgui</i>	<i>vulguis</i>	<i>vulgui</i>	<i>vulguem</i>	<i>vulgueu</i>	<i>vulguin</i>

Valencian

	1SG	2SG	3SG	1PL	2PL	3PL
PRS.IND	<i>vullc</i>	<i>vols</i>	<i>vol</i>	<i>volem</i>	<i>voleu</i>	<i>volen</i>
PRS.SBJV	<i>vullga</i>	<i>vullgues</i>	<i>vullga</i>	<i>vullgam</i>	<i>vullgau</i>	<i>vullguen</i>

Corpus results

- **First-person present indicative:** the percentage distribution between non-velarized (*vull* ['vuλ] 'I want') and velarized forms (*vullc* ['vuλk] 'I want') varies noticeably throughout the studied period ($\chi^2_{(4)} = 83.782$, $p < 0.001$, Cramér's $V = 0.794$).
- **Present subjunctive:** the distribution of non-velarized (e.g., *vulla* ['vuλa] 's/he want') and velarized forms (e.g., *vulga* ['vulya] ~ *vullga* ['vuλya] 's/he want') varies significantly during the studied period ($\chi^2_{(6)} = 356.474$, $p < 0.001$, Cramér's $V = 0.983$).

Discussion

- The velarization of the present subjunctive already seems consolidated in the second half of the 18th century.
- The spread of /g/ in the first-person present indicative is limited to Valencian and consolidated in the 19th century.
- In **Valencian**, both the **uniformity principle** and the **coherence and convergence** principles come into play: the L-pattern remains homogeneous, with the same root (*vull-*) and the presence of the velar augment (/g/) in all the morpheme cells.

Discussion

- In general Catalan, the analogical velarization of the present subjunctive entails the creation of a new allomorph (*vul-*), while the first-person present indicative preserves the etymological *vull* ‘I want’.
- **L-pattern blurring**: analogical velarization affects only one part of the morpheme.
- The phonological markedness of combining a palatal consonant with a velar may have hindered this change (but 1SG.PRS.IND *vall* >> *valc* ['valk] ‘I/he/she cost’). This solution seems not to have worked for *vull*, probably due, again, to its high frequency.

6. Conclusions

Conclusions

1. Normally, the evolution of morphomic patterns is usually coherent.
2. The more a verb is used, the less susceptible it is to morphological regularization patterns.
3. Frequency can sometimes exert greater pressure than morphomic coherence in verbal diachronic evolution.

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