Selective class drop in Isu: A case for cyclic morphology

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1. Overview

I. Isu (Western Ring, Grassfields Bantu, Cameroon) has **a selective class drop**: CV, but not C or V classes are deleted in the presence of some modifiers.

II. Classes are **decomposed into binary features**, not represented as primitives (Wiese 2004, Wunderlich 2004, Müller 2004, Alexiadou & Müller 2008).

III. **Iconicity in morphology**: More features tend to correspond to more phonological material (Givón 1991, Newmeyer 1992, Downing & Stiebels 2012).

IV. **Morphology is cyclic**: There are rule orderings, but no modules (pace Halle & Marantz 1993). ⇝ Impoverishment may counterfeed Vocabulary Insertion.

2. The data: Nominal prefix drop in Isu

➤ Empirical basis of this study comes from previous research on Isu (mostly Kießling 2010, 2018) and elicitation with Isu native speakers.

➤ Isu parallels most Bantu languages in that nouns must take class markers:

(1) a. *(ká)-bá
7-fufu
'fufu'

b. *(í)-fú
5-axe
'axe'

➤ CV, but not C or V class prefixes are dropped if the noun is modified by, for example, possessive pronouns (2) or adjectives (3).

(2) a. (*ká)-bá k-ám
7-fufu 7-POSS.1SG
'my fufu'

b. *(í)-fú y-ám
5-axe 5-POSS.1SG
'my axe'

(3) a. (*ká)-bá kə̀-nĕ k-é
7-fufu 7-big 7-ENC
'big fufu'

b. *(í)-fú ì-nĕ y-é
5-axe 5-big 5-ENC
'big axe'

➤ Numerals do not trigger class drop: All class markers are obligatorily present (4).

(4) a. *(ká)-bá ká-mɔ̀ʔ
7-fufu 7-one
'one fufu'

b. *(í)-fú í-mɔ̀ʔ
5-axe 5-one
'one axe'

➤ When numerals combine with other modifiers, CV classes are dropped.

(5) a. (*ká)-bá k-ám ká-mɔ̀ʔ
7-fufu 7-POSS.1SG 7-one
'my one fufu'

b. *(í)-fú y-ám í-mɔ̀ʔ
5-axe 5-POSS.1SG 5-one
'my one axe'

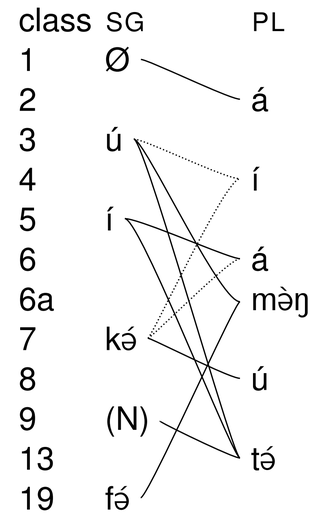
3. Formal decomposition of Isu noun classes

➤ Isu has a complex system of nominal class that is not deductible from meaning.

➤ The scheme in (6) relies on the standard Bantu class numbering (Maho 1999) and shows **sg-pl correspondences** in Isu (adapted from Kießling 2018).
- Nouns of one class in singular can belong to different classes in plural.
- Nouns of one class in plural can belong to different classes in singular.

➤ We suggest a **re-analysis** of Isu classes:
⇝ Non-trivial correspondences are an illusion created by syncretism.

(6) SG/PL correspondences



➤ Classes are not primitives, they are **decomposed into binary features** (Wiese 2004, Wunderlich 2004, Müller 2004, Alexiadou & Müller 2008).

➤ In Isu, three features [±α, ±β, ±γ] distinguish eight classes.

➤ Underspecified exponents are syncretic between different classes.

(7) Isu class – new system

class	features	SG	PL
I	[−γ, +α, +β]	ø ↔ [−γ, +α, +β, sg]	a ↔ [+α, +β, pl]
IV	[+γ, +α, +β]	i ↔ [+β, sg]	
V	[+γ, −α, +β]		tə ↔ [+γ, pl]
VII	[+γ, −α, −β]	N ↔ [−α, −β, sg]	
III	[+γ, +α, −β]	u ↔ [+α, −β, sg]	
II	[−γ, +α, −β]		ŋ ↔ [−β, pl]
VIII	[−γ, −α, −β]	fə ↔ [−γ, −α, −β, sg]	
VI	[−γ, −α, +β]	kə ↔ [−γ, −α, +β, sg]	u ↔ [−α, pl]

➤ Features are organized in a hierarchy (Noyer 1992) and [γ] is **more marked**: γ > β > α. All CV exponents, but not C and V exponents bear [±γ].

4. Isu DP syntax and class impoverishment

➤ Class drop is triggered by **Impoverishment** that **relies on c-command** (cf. Kallulli & Trommer 2011, Božič 2020 on c-command and Impoverishment).

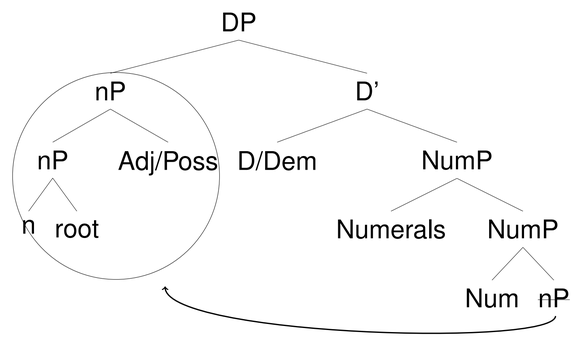
(8) Impoverishment rule
n[γ] → n[ø] / if c-commanded by [γ]

➤ All modifiers other than numerals **c-command** the *n* (assuming feature projection as in Béjar & Rezac 2003, Keine & Dash 2023) and trigger impoverishment.

➤ **Word order** in Isu DP: N > Poss > Adj > Det > Numeral

(9) fú k-ám kə̀-ghá ʔá k-ə́ ká-mɔ̀ʔ
rat 7-POSS.1SG 7-big 7-DEM 7-one
'that my one big rat'

(10) nP moves to Spec,DP



➤ Isu has a regular sequence of nominal projections **n—NumP—DP**.

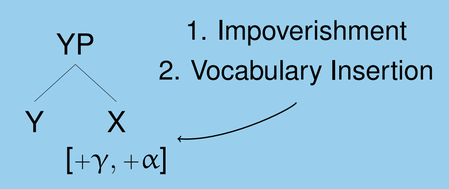
➤ The surface order is derived by **moving nP to Spec,DP** (Fongang 2024).

➤ Class features are on *n* (Kramer 2015, Fuchs & van der Wal 2022).

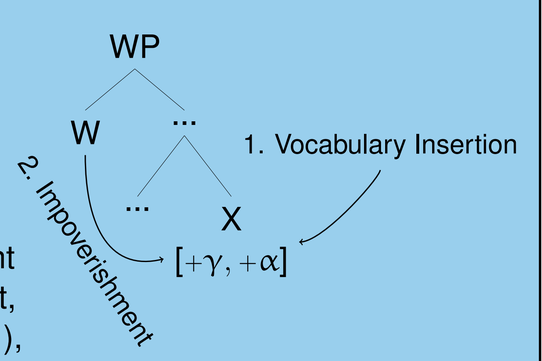
5. Cyclic morphology

- Impoverishment leads to deletion of full CV exponent, not retreat to a more general exponent C or V marker because **morphology is cyclic**.
  - Morphology processes the structure bottom-up, so that Vocabulary Insertion applies before Impoverishment, if the latter is triggered by higher material.

(11) Impoverishment > VI



(12) VI > Impoverishment



➤ Predecessors for **interleaving Vocabulary Insertion** and various structure readjustment operations (Fission, Fusion, head movement, Lowering): Noyer (1992), Dobler et al. (2011), Piggott & Travis (2017), Privizentseva (2024).

6. Derivations

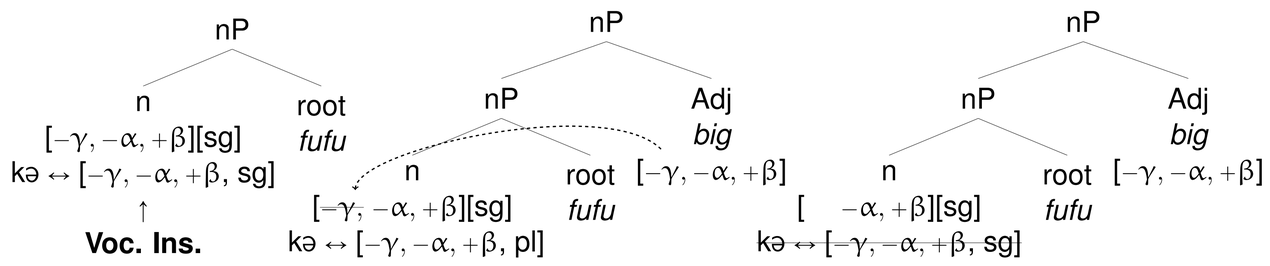
➤ Going through the structure **bottom-up**, morphology encounters the *n* node.
① Vocabulary Insertion applies to *n*. ⇝ CV prefix with [−γ] is inserted.

➤ The derivation goes on and encounters **the adjective**.
② Impoverishment of [−γ].

➤ Inserted vocabulary item has more features than syntactic node.
③ **Subset principle** is violated ⇝ CV class prefix is deleted.

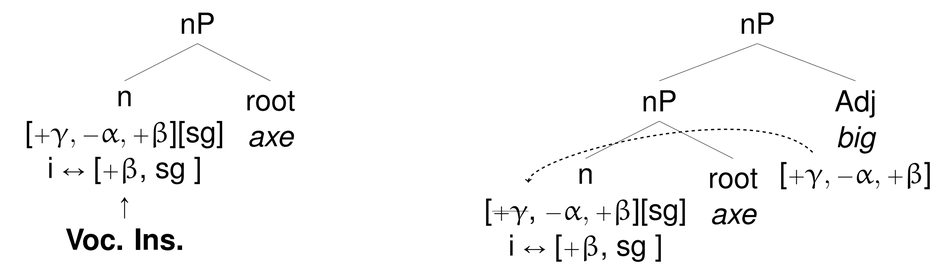
➤ Vocabulary insertion cannot re-apply because it would then target a proper subpart of the structure and violate the **Strict Cycle Condition** (Chomsky 1973, 2019).

Step 1: Insertion Step 2: Impoverishment Step 3: Deletion



➤ If inserted prefix is not specified for [±γ], **Impoverishment has no effect**.
⇝ V and C classes are not dropped as they bear no [±γ].

Step 1: Insertion Step 2: Impoverishment



7. Outlook

➤ On the basis of novel data from Isu, this work argues for formal decomposition of nominal classes and cyclic (non-modular) architecture of morphology.

Selected references: Alexiadou, A. & G.Müller (2008): Class features as probes. In: A. Bachrach & A. Nevins, eds., Inflectional identity, pp. 101–155. • Božič J. 2020. Strictly local impoverishment: An intervention effect. Linguistic Inquiry 51(2). • Downing, L.& B. Stiebels. 2012. Iconicity. In: J. Trommer (ed.), The morphology and phonology of exponence, pp. 379–426. • Kallulli, D. & J. Trommer (2011): Closest c-command, Agree and Impoverishment: The morphosyntax of non-active voice in Albanian, Acta Linguistica Hungarica 58(3). • Kießling, R. (2018): Noun classes, genders, declensions in Grassfelds Bantu–preliminary generalisations on their dynamics (with a focus on the Ring subgroup), Colloquium talk, Humboldt-Universität, Berlin.