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Imagining Life without Rules of
Exponence and the Elsewhere Condition

WOMP

Princeton University

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Presentations

2024. Imagining Life without Rules of Exponence and the Elsewhere Condition. [[companion handout \(long version\)](#)], [[fragment](#)], [[counter-fragment 2.0](#)] (Talk at the Workshop on Morphology at Princeton, March 23, 2024)

Online now—Google “Neil Myler linguist”, and look under “Presentations”

Rules of Exponence and the Elsewhere Condition

I am we are
you are you(se) are
{he/she/it} is they are

Rules of Exponence and the Elsewhere Condition

I am we are
you are you(se) are
{he/she/it} is they are

BE \leftrightarrow am / __ T:pres,1sg

BE \leftrightarrow is / __ T:pres,3sg

BE \leftrightarrow are / __ T:pres

Anderson (1992:132); Asudeh, Bögel, and
Siddiqi (2023); Halle and Marantz (1993:123);
Starke (2009:4); Stump (2001:22, 2016:50)

Rules of Exponence and the Elsewhere Condition

I am we are
you are you(se) are
{he/she/it} is they are

BE \leftrightarrow am / __ T:pres,1sg

BE \leftrightarrow is / __ T:pres,3sg

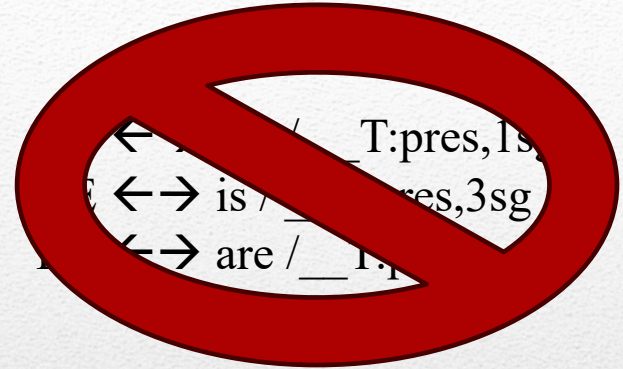
BE \leftrightarrow are / __ T:pres

Kayne and Collins (2023); Collins (2018, 2020);
several other papers:

- No Rules of Exponence
- No Elsewhere Condition

Morphology as Syntax

I am we are
you are you(se) are
{he/she/it} is they are




Kayne and Collins (2023); Collins (2018, 2020);
several other papers:

- No Rules of Exponence
- No Elsewhere Condition

Morphology as Syntax

- To help count the cost of living without Rules of Exponence and the Elsewhere Condition, it would help to have a soup-to-nuts treatment of a sizable portion of a complicated morphological system in Morphology as Syntax.
- So that's what I did last summer: a MaS fragment of a grammar for Latin noun declension.

Motivation

- 
- ~~1. Rules of Exponence and the Elsewhere Condition~~
 2. Intro to Latin Declension and to Morphology as Syntax
 3. The (Syntactic Part of the) Fragment
 4. Commentary
 5. Conclusion

The Plan

- Number: Singular/Plural
- Case: Nominative/Accusative/Genitive/Dative/Ablative (/Vocative/Locative)
- Declension Classes: 5 (traditionally; Weiss 2009:213 suggests 6; I end up with 7).
- Gender: Masculine, Feminine, and Neuter (not expounded independently of Declension Class in Nouns, but Neuters decline differently from Non-Neuters. There are also statistical correlations between declension class and gender, which aren't captured by the fragment)

Latin Noun Declension

Root-Theme-Case/Num

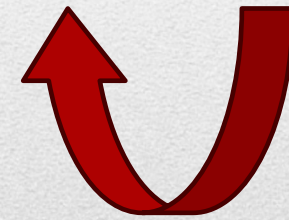
**Traditional
Decomposition**

Root-Th-(Num)-Case-Num

allomorphy

My Proposed Decomposition ₁₂

Root-Th-(Num)-Case-Num



allomorphy

My Proposed Decomposition 13

Root-Th-(Num)-Case-Num

4th Declension

Case/Num	SG	PL
Nominative	stat-u-s-∅	stat-u-μ-s
Accusative	stat-u-m-∅	stat-u-μ-s
Genitive	stat-u-μs-∅	stat-u-um-s
Dative	stat-u-ī-∅	stat-ibu-s
Ablative	stat-u-μ-∅	stat-ibu-s

Root-Th-(Num)-Case-Num

4th Declension

Case/Num	SG	PL
Nominative	stat-u-s-∅	stat-u-μ-s
Accusative	stat-u-m-∅	stat-u-μ-s
Genitive	stat-u-μs-∅	stat-u-um-s
Dative	stat-u-ī-∅	stat-ibu-s
Ablative	stat-u-μ-∅	stat-ibu-s

Root-Th-(Num)-Case-Num

4th Declension

Case/Num	SG	PL
Nominative	stat-u-s-∅	stat-u-μ-s
Accusative	stat-u-m-∅	stat-u-μ-s
Genitive	stat-u-μs-∅	stat-u-um-s
Dative	stat-u-ī-∅	stat-ibu-s
Ablative	stat-u-μ-∅	stat-ibu-s

UR: /stat-u-um-s/

(15) statuum (s-deletion / m+__#)

SR: [statuum]

Root-Th-(Num)-Case-Num

*Ask me about
hiem[p]s at the
end!*

4th Declension

Case/Num	SG	PL
Nominative	stat-u-s-∅	stat-u-μ-s
Accusative	stat-u-m-∅	stat-u-μ-s
Genitive	stat-u-μs-∅	stat-u-um-s
Dative	stat-u-ī-∅	stat-ibu-s
Ablative	stat-u-μ-∅	stat-ibu-s

UR: /stat-u-um-s/

(15) statuum (s-deletion / m+__#)

SR: [statuum]

Root-Th-(Num)-Case-Num

2nd Declension

Case/Num	SG	PL
Nominative	domin-u-s-∅	domin-ī-∅
Accusative	domin-u-m-∅	domin-o-μ-s
Genitive	domin-ī-∅	domin-ō-r-um
Dative	domin-o-μ-∅	domin-ī-s
Ablative	domin-o-μ-∅	domin-ī-s

Root-Th-(Num)-Case-Num

2nd Declension

Case/Num	SG	PL
Nominative	domin-u-s-∅	domin-ī-∅
Accusative	domin-u-m-∅	domin-o-μ-s
Genitive	domin-ī-∅	domin-ō-r-um
Dative	domin-o-μ-∅	domin-ī-s
Ablative	domin-o-μ-∅	domin-ī-s

Root-Th-(Num)-Num-Case

Order in the genitive plural in 1st, 2nd, and 5th Declensions

	2nd Declension	
Case/Num	SG	PL
Nominative	domin-u-s-∅	domin-ī-∅
Accusative	domin-u-m-∅	domin-o-μ-s
Genitive	domin-ī-∅	domin-ō-r-um
Dative	domin-o-μ-∅	domin-ī-s
Ablative	domin-o-μ-∅	domin-ī-s

(14) s → r / V__ +V (Oniga 2014:58, his (20))

BUT: See Gorman 2014!

Root-Th-(Num)-Num-Case

Order in the genitive plural in 1st, 2nd, and 5th Declensions

	2nd Declension	
Case/Num	SG	PL
Nominative	domin-u-s-∅	domin-ī-∅
Accusative	domin-u-m-∅	domin-o-μ-s
Genitive	domin-ī-∅	domin-ō-r-um
Dative	domin-o-μ-∅	domin-ī-s
Ablative	domin-o-μ-∅	domin-ī-s

Halle and Vaux (1998) also analyze this [r] as an underlying /s/, but the morphological status of that /s/ is different in their analysis.

- MaS: Collins and Kayne (2023) and refs cited there.
- Traditional Item-and-Arrangement, non-realizational theory in which syntax builds all “word”-internal structure.
- All departures from the “agglutinative ideal” have to be handled using purely syntactic tools (prominently: selection, silent elements).

Morphology as Syntax


- MaS: Collins and Kayne (2023) and refs cited there.
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Morphology as Syntax

- MaS: Collins and Kayne (2023) and refs cited there.
- Traditional Item-and-Arrangement, non-realizational theory in which syntax builds all “word”-internal structure.
- All departures from the “agglutinative ideal” have to be handled using purely syntactic tools (prominently: selection, silent elements).

*No appeals to the Elsewhere Condition allowed:
selectional frames don't compete with each other!*

Morphology as Syntax

- 
- ~~1. Rules of Exponence and the Elsewhere Condition~~
 - ~~2. Intro to Latin Declension and to MaS~~
 3. The (Syntactic Part of the) Fragment
 4. Commentary
 5. Conclusion

The Plan

- Syntactic part:
 - 41 lexical items
 - One hierarchy of projections
 - Merge
 - A checking-based version of Agree
 - Two deletion rules [left out due to time]
 - A Generalized and Parameterized version of Kinyalolo's Constraint
 - A feature decomposition for the declension classes (disjunctions over primitive class features in these slides for expository convenience).
- Morphophonological part: 33 phonological rules (à la Chomsky and Halle 1968; but with floating moras), mostly taken from Oniga (2014).
- 110 sample derivations, mostly hand-written (sorry), though some have been LaTeXified.

The Fragment

- Based on textbook presentations of the declension paradigms (Oniga 2014; Allen & Greenough 1872 via Mayer 2014), not texts (I'm not good enough at Latin to work with those).
- Only deals with nouns (no adjectives, demonstratives, ...)
- No irregular stem alternations (on which see McFadden 2018)
- No incompletely assimilated loan words
- Omits vocative and locative cases (though see Calabrese 2008:169 for an argument against recognizing a separate locative case anyway)
- Doesn't deal with heteroclisis (i.e. nouns that can't decide what declension class they are in).
- Doesn't deal with *filiābus*, *pater familiās*, and similar monstrosities.

Ways in which the data for the fragment are “sanitized”

- (1) Class:1, PHON:a, [*-sigmatic*]; [*•Root*]
- (2) Class:2, PHON:o; [*•Root*]
- (9) Num:PL, PHON:s; [*•np*]
-
- (10) N_F:PL, Class:__, PHON:a; [*•np_{+neut}*]
- (38) N_F:PL, Class:__, PHON:j; [*•np_{-neut,class1}*]
- (11) Case:NOM, PHON:s; [*□Num : SG*], [*•np_{+sigmatic}*]
- (12) Case:NOM, PHON:∅; [*□Num : SG*], [*•np_{-neut,-sigmatic}*]
- (13) Case:NOM, PHON:m; [*□Num : SG*], [*•np_{class2,+neut,-sigmatic}*]
- (24) Case:GEN, PHON:um; [*□Num : PL*], [*•np*] _{*pied-pipeAccPi fNPclass=1,2,5!*}

Some Sample Lexical Items

See Müller (2009, 2013, et seq.), from which this notation for syntactic operations is adapted

- (1) Class:1, PHON:a, [*-sigmatic*]; [*•Root*]
- (2) Class:2, PHON:o; [*•Root*]
- (9) Num:PL, PHON:s; [*•np*]

- (10) N_F:PL, Class:__, PHON:a; [*•np_{+neut}*]
- (38) N_F:PL, Class:__, PHON:j; [*•np_{-neut,class1}*]
- (11) Case:NOM, PHON:s; [*□Num : SG*], [*•np_{+sigmatic}*]
- (12) Case:NOM, PHON:∅; [*□Num : SG*], [*•np_{-neut,-sigmatic}*]
- (13) Case:NOM, PHON:m; [*□Num : SG*], [*•np_{class2,+neut,-sigmatic}*]
- (24) Case:GEN, PHON:um; [*□Num : PL*], [*•np*] _{*pied-pipeAccPi fNPclass=1,2,5!*}

Some Sample Lexical Items

Note that Agree here has to be construed as checking for identity, rather than being based on valuation.

(36) The Nominal Functional Sequence (partial)
AblP»DatP»GenP»AccP»NomP»NumP»NP

On Case>>Num>>NP see, amongst others, Moskal (2015), Greenberg's (1963:75) Universal 39, and Kloudová's (2020) updating of the latter.

On the Case Field, see Caha (2009. 2013), Collins (2020); these in turn are a syntacticization of Blake (1994).

Hierarchy of Projections

(36) The Nominal Functional Sequence (partial)
AblP»DatP»GenP»AccP»NomP»NumP»NP

NP → Root Class

NP_F → NP N_F (Low, irregular number marker, if present)

NP_(F) as a whole will bear features such as:

- +/-sigmatic
- Gender
- Class

Hierarchy of Projections

No Crowding Constraint

In the extended case projection of a noun (see (5)), only the highest overt case marker is spelled out. The other case markers are unpronounced.

Collins (2020:4, his (12))

A Constraint on Spell Out



Kinyalolo's Constraint Generalized (KCG) (compare Kinyalolo 1991:52, his (65), et seq.)
Within a given syntactic domain D , for a given feature F , only the highest overt head bearing an instance of F is pronounced on the surface if the values of F on lower heads are predictable from the value of F on the highest head.

See also Carstens (2005, which introduced the name “Kinyalolo’s Constraint”), Henderson (2011), Newman (2021), and Oxford (2023); Hewett and Kramer (yesterday).

A More General Constraint on Spell Out



Kinyalolo's Constraint Generalized (KCG) (compare Kinyalolo 1991:52, his (65), et seq.)
Within a given syntactic domain D, for a given feature F, only the highest overt head bearing an instance of F is pronounced on the surface if the values of F on lower heads are predictable from the value of F on the highest head.

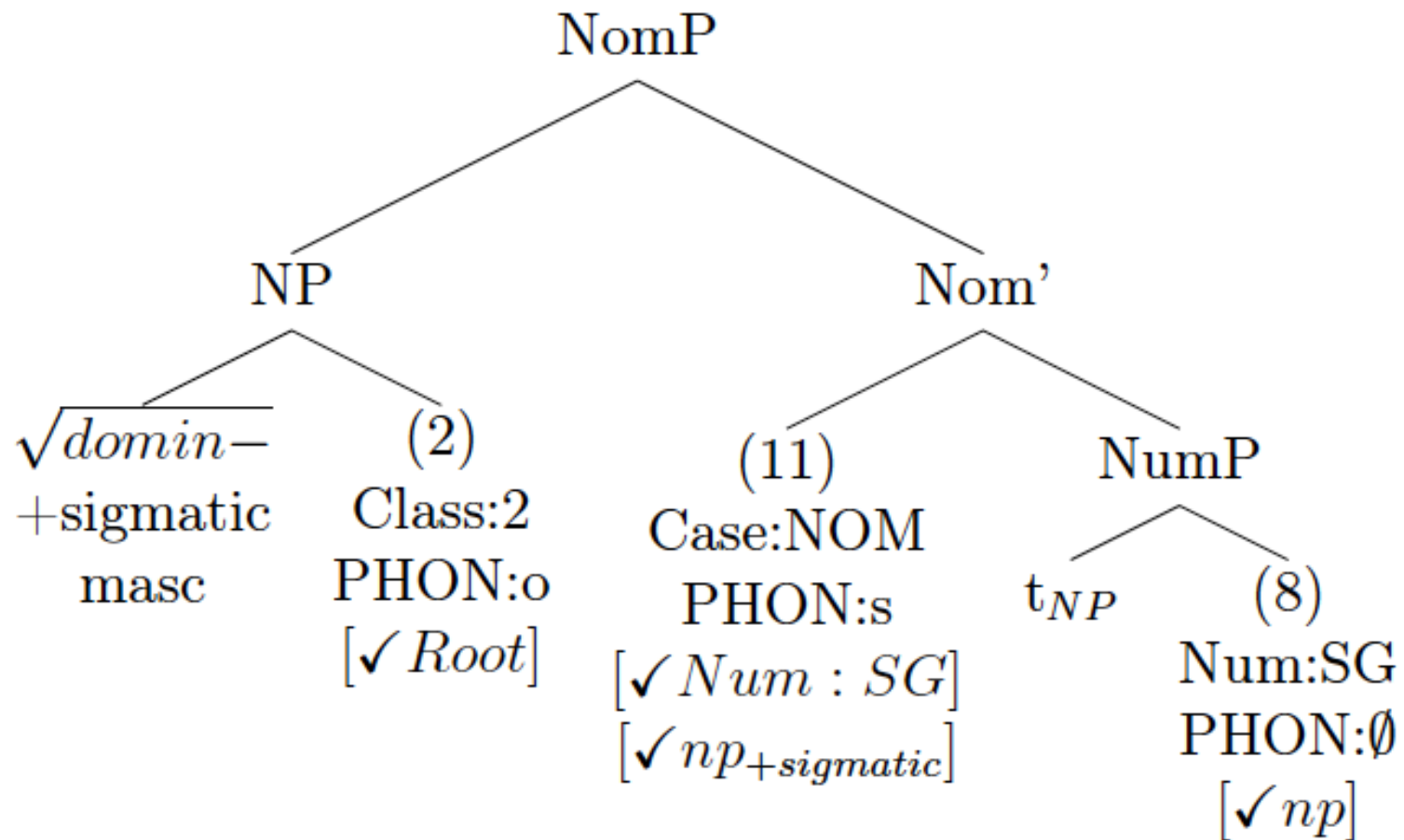
Holds in Latin for:

- Case Features in the Case Field (predictable thanks to the hierarchy of projections).
- Interpretable Number Features across the nominal extended projection (occur on Num and, if present, N_F).

A More General Constraint on Spell Out

Examples: 2nd Declension Non-Neuter Singulars

dominus (nominative singular)

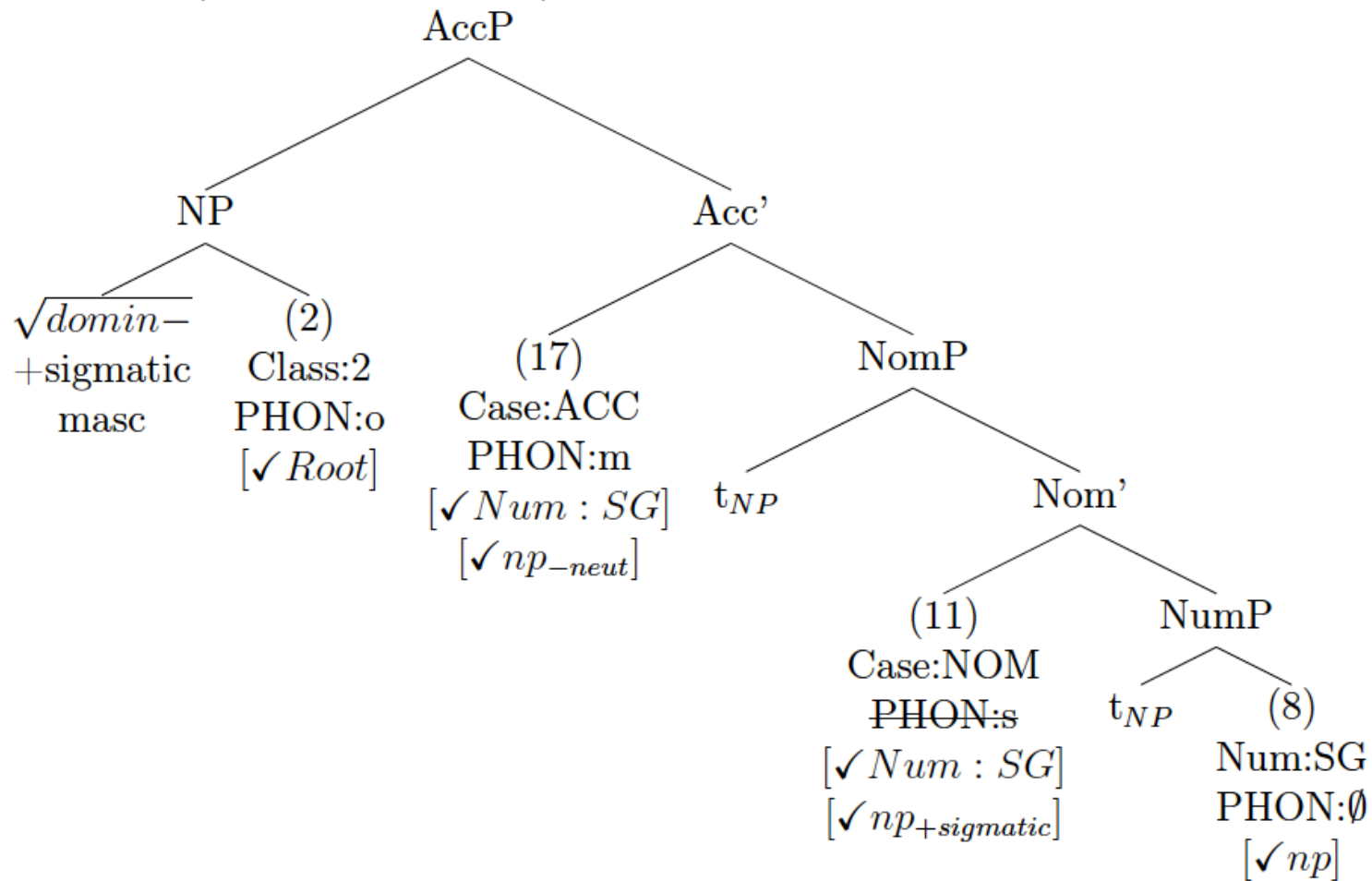


UR: /domin-o-s-∅/

(13) dominus (short-o raising)

SR: [dominus]

dominum (accusative singular)

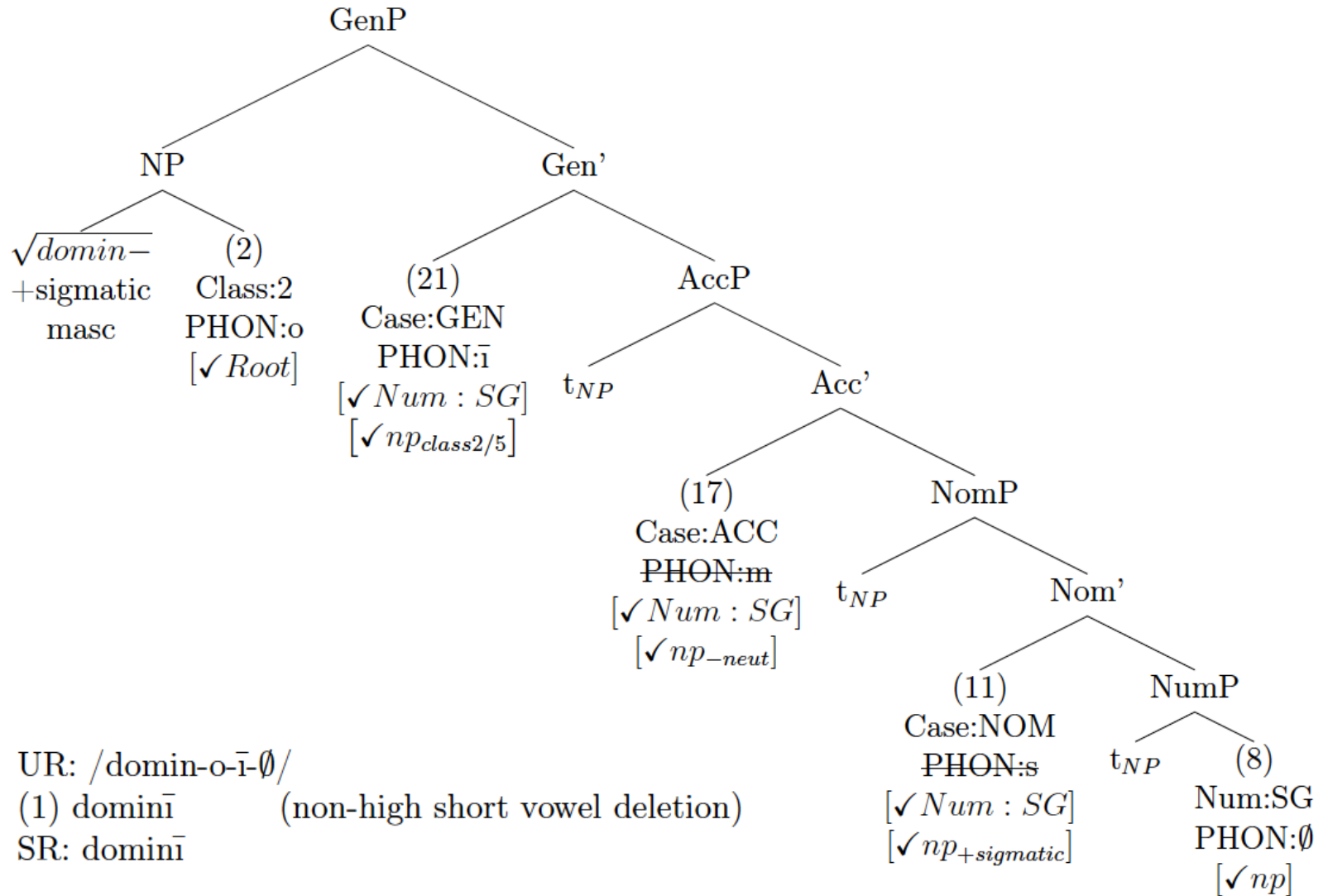


UR: /domin-o-m-∅/

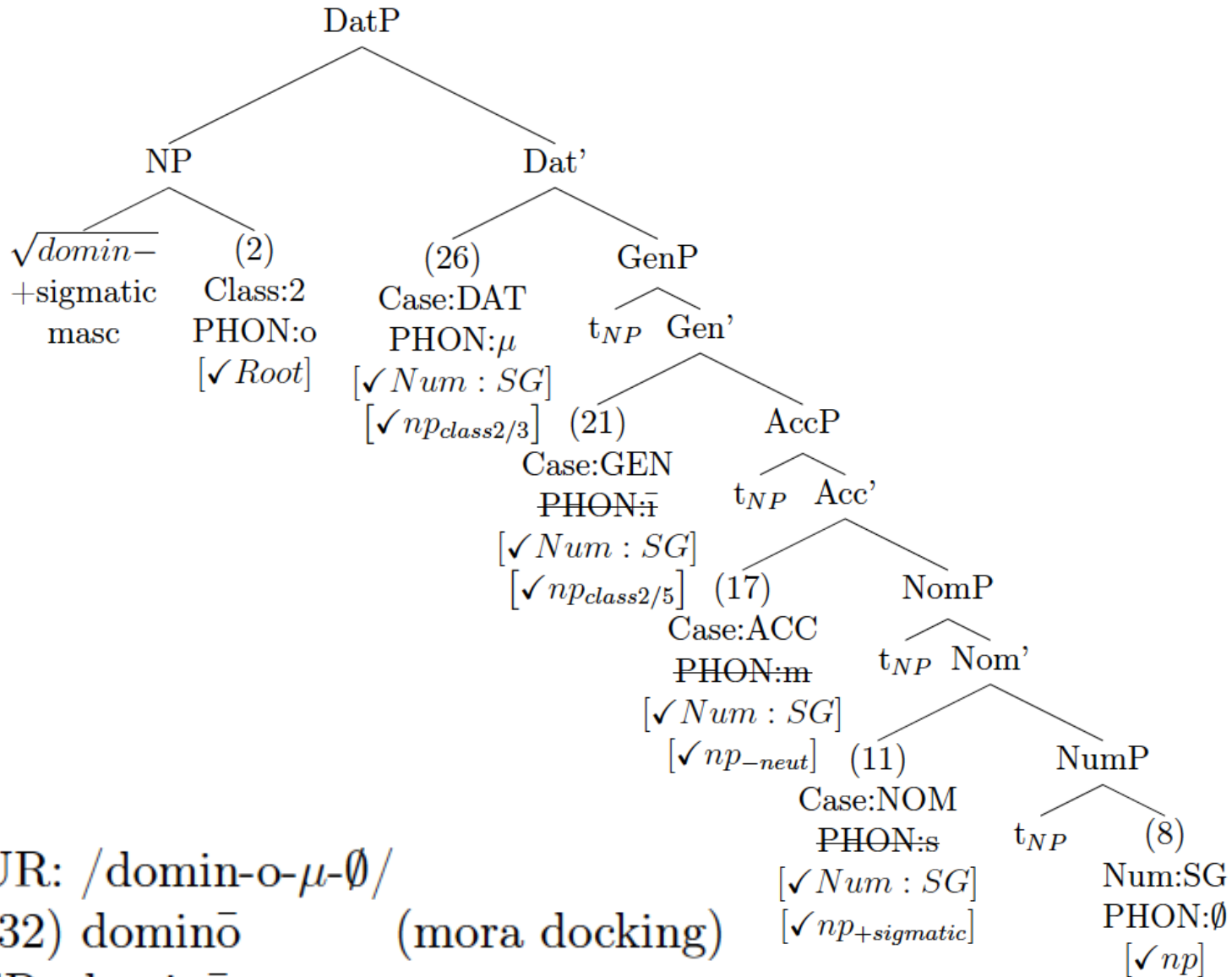
(13) dominum (short-o raising)

SR: [dominum]

dominī (genitive singular)



dominō (dative singular)

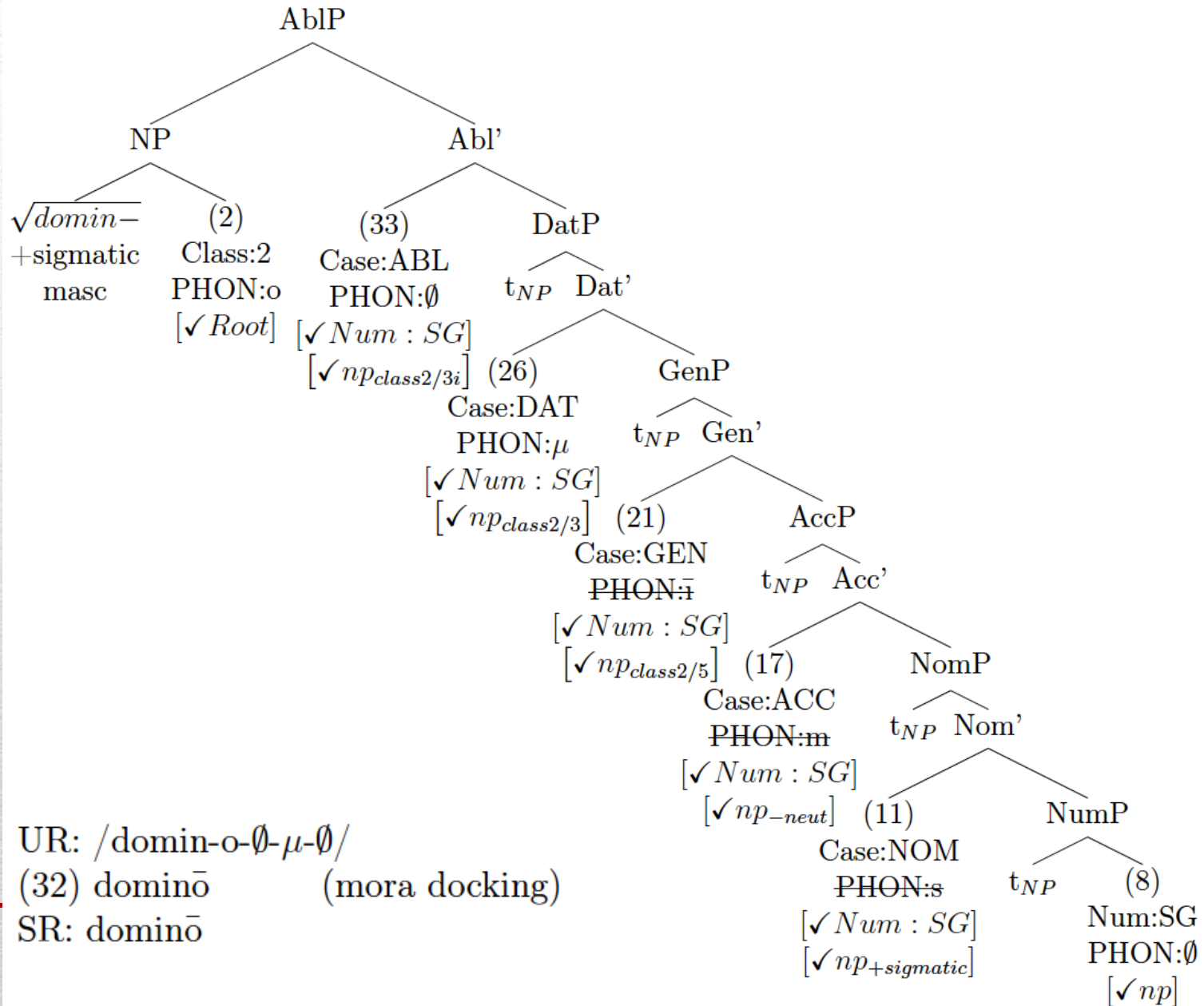


UR: /domin-o-μ-∅/

(32) dominō (mora docking)

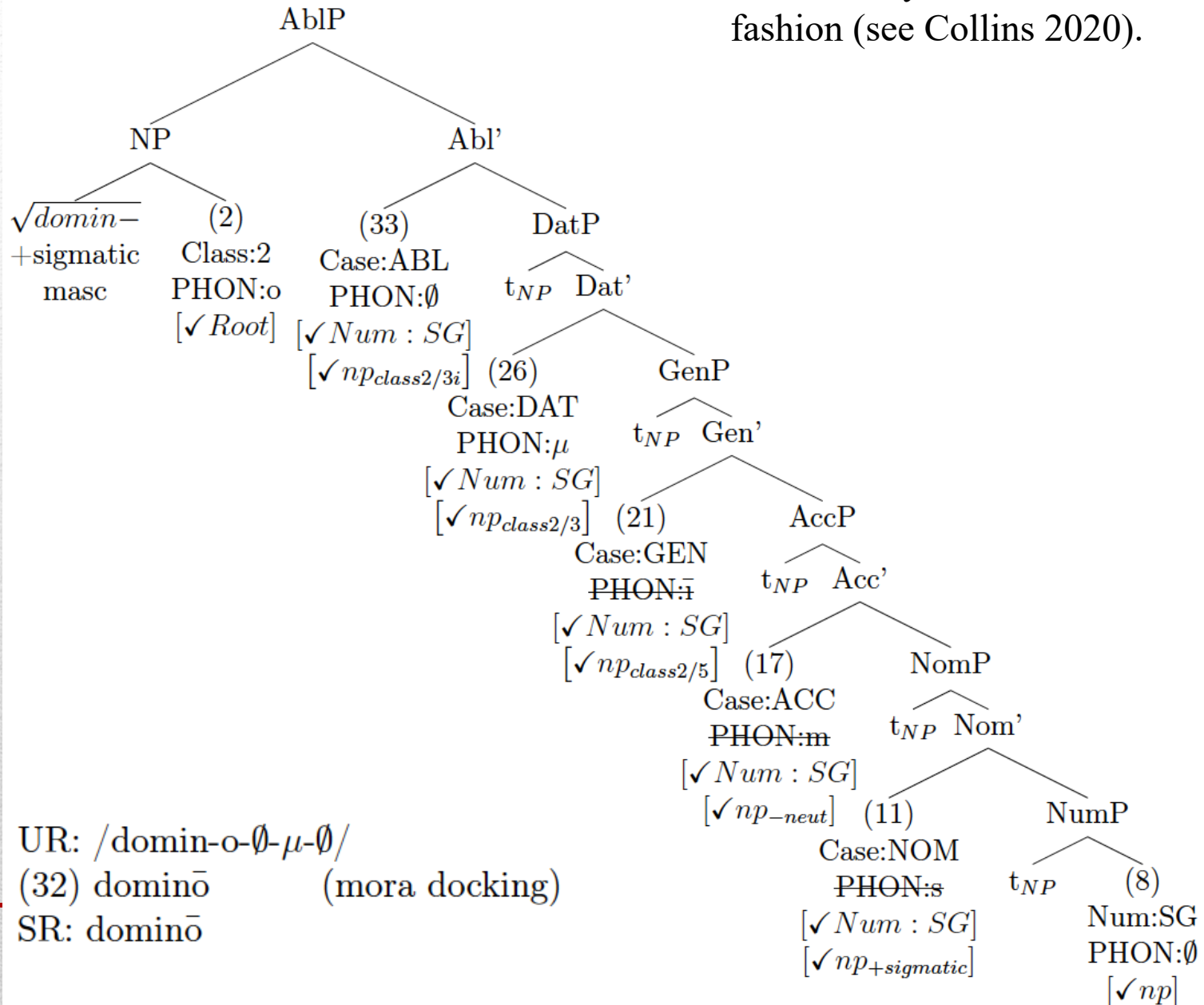
SR: dominō

dominō (ablative singular)



dominō (ablative singular)

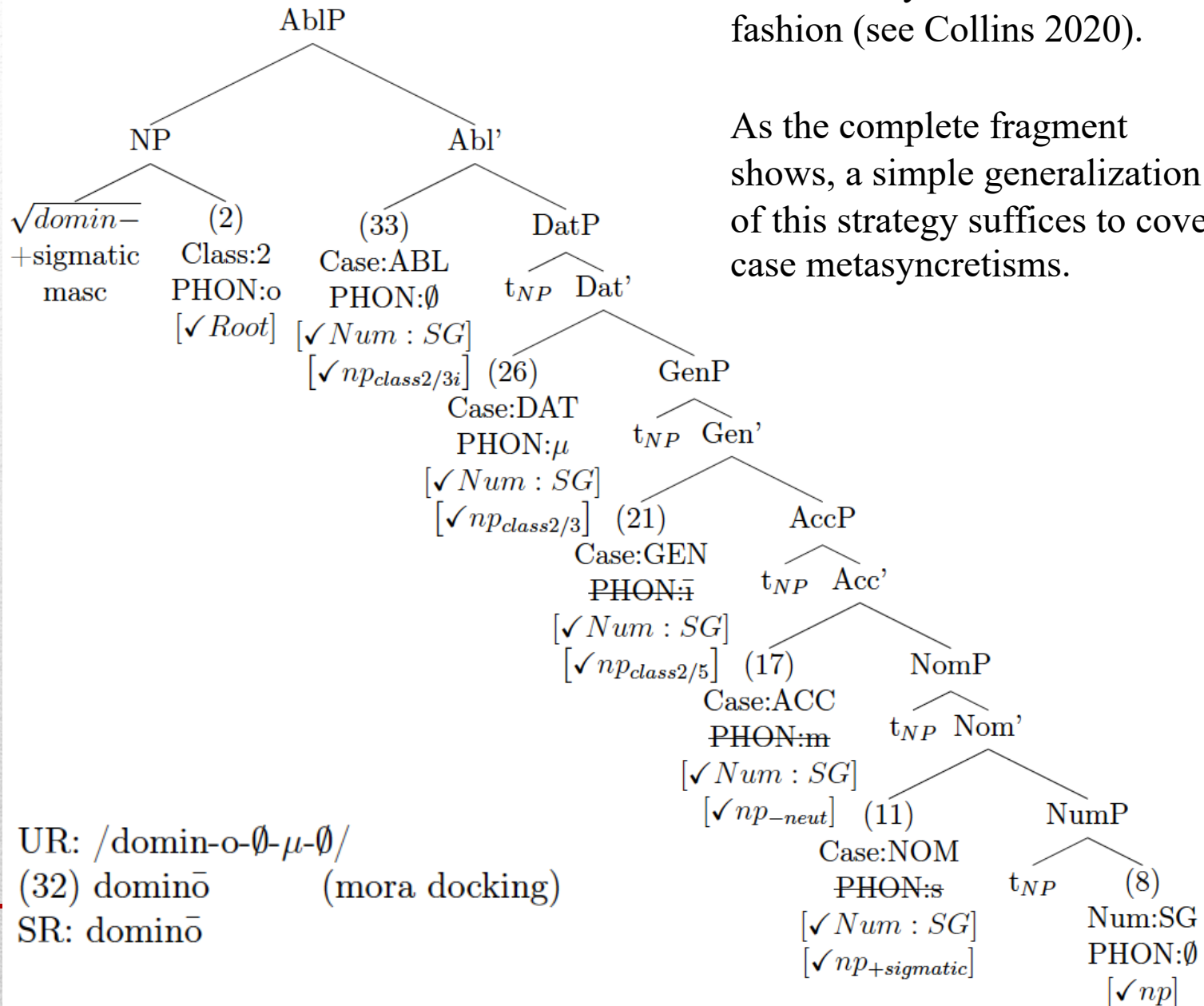
All vertical case syncretisms can be analyzed in like fashion (see Collins 2020).



dominō (ablative singular)

All vertical case syncretisms can be analyzed in like fashion (see Collins 2020).

As the complete fragment shows, a simple generalization of this strategy suffices to cover case metasyncretisms.



Case Metasyncretisms arise when (i) a higher case head is both null and less picky as to number and/or class than the case head immediately below it, and (ii) there is more than one lexical item in the language that can appear in the lower case position.

The General Strategy for Case Metasyncretism in MaS

Dat PL = Abi PL

1st Declension

Case/Num	SG	PL
Nominative	puell-a- o	puell-a-j- o
Accusative	puell-a-m- o	puell-a- mu -s
Genitive	puell-a-j- o	puell-a-r-um
Dative	puell-a-j- o	puell-i-s
Ablative	puell-a- mu - o	puell-i-s

2nd Declension

Case/Num	SG	PL
Nominative	domin-u-s- o	domin-i- o
Accusative	domin-u-m- o	domin-o- mu -s
Genitive	domin-i- o	domin-o-r-um
Dative	domin-o- mu - o	domin-i-s
Ablative	domin-o- mu - o	domin-i-s

3rd Declension c-stem

Case/Num	SG	PL
Nominative	rēg-s- o [rēks]	rēg-e- mu -s
Accusative	rēg-e-m- o	rēg-e- mu -s
Genitive	rēg-is- o	rēg-um- o
Dative	rēg-i- mu - o	rēg-ibu-s
Ablative	rēg-e- o	rēg-ibu-s

3rd Declension i-stem

Case/Num	SG	PL
Nominative	turr-i-s- o	turre- mu -s
Accusative	turr-i-m- o	turr{-i/e}- mu -s
Genitive	turr-is- o	turr-i-um- o
Dative	turr-i- mu - o	turr-ibu-s
Ablative	turr-i{- mu / e }- o	turr-ibu-s

3rd Declension mixed stem

Case/Num	SG	PL
Nominative	urb-s- o [urps]	urbe- mu -s
Accusative	urbe-m- o	urb{-i/e}- mu -s
Genitive	urb-is- o	urb-i-um- o
Dative	urbi- mu - o	urb-ibu-s
Ablative	urb-e- o	urb-ibu-s

4th Declension

Case/Num	SG	PL
Nominative	stat-u-s- o	stat-u- mu -s
Accusative	stat-u-m- o	stat-u- mu -s
Genitive	stat-u- mu - o	stat-u-um- o
Dative	stat-u-i- o	stat-ibu-s
Ablative	stat-u- mu - o	stat-ibu-s

5th Declension

Case/Num	SG	PL
Nominative	r-ē-s- o	r-ē- mu -s
Accusative	r-e-m- o	r-ē- mu -s
Genitive	r-ē-i- o	r-ē-r-um
Dative	r-ē-i- o	r-ē-bu-s
Ablative	r-ē- mu - o	r-ē-bu-s

1st Declension

Case/Num	SG	PL
Nominative	puell-a- o	puell-a-j- o
Accusative	puell-a-m- o	puell-a- mu -s
Genitive	puell-a-j- o	puell-a-r-um
Dative	puell-a-j- o	puell-i-s
Ablative	puell-a- mu - o	puell-i-s

2nd Declension

Case/Num	SG	PL
Nominative	domin-u-s- o	domin-i- o
Accusative	domin-u-m- o	domin-o- mu -s
Genitive	domin-i- o	domin-o-r-um
Dative	domin-o- mu - o	domin-i-s
Ablative	domin-o- mu - o	domin-i-s

3rd Declension c-stem

Case/Num	SG	PL
Nominative	rēg-s- o [rēks]	rēg-e- mu -s
Accusative	rēg-e-m- o	rēg-e- mu -s
Genitive	rēg-is- o	rēg-um- o
Dative	rēg-i- mu - o	rēg-ibu-s
Ablative	rēg-e- o	rēg-ibu-s

3rd Declension i-stem

Case/Num	SG	PL
Nominative	turr-i-s- o	turre- mu -s
Accusative	turr-i-m- o	turr{-i/e}- mu -s
Genitive	turr-is- o	turr-i-um- o
Dative	turr-i- mu - o	turr-ibu-s
Ablative	turr-i{- mu / e }- o	turr-ibu-s

3rd Declension mixed stem

Case/Num	SG	PL
Nominative	urb-s- o [urps]	urbe- mu -s
Accusative	urbe-m- o	urb{-i/e}- mu -s
Genitive	urb-is- o	urb-i-um- o
Dative	urbi- mu - o	urb-ibu-s
Ablative	urb-e- o	urb-ibu-s

4th Declension

Case/Num	SG	PL
Nominative	stat-u-s- o	stat-u- mu -s
Accusative	stat-u-m- o	stat-u- mu -s
Genitive	stat-u- mu - o	stat-u-um- o
Dative	stat-u-i- o	stat-ibu-s
Ablative	stat-u- mu - o	stat-ibu-s

5th Declension

Case/Num	SG	PL
Nominative	r-ē-s- o	r-ē- mu -s
Accusative	r-e-m- o	r-ē- mu -s
Genitive	r-ē-i- o	r-ē-r-um
Dative	r-ē-i- o	r-ē-bu-s
Ablative	r-ē- mu - o	r-ē-bu-s

(30) Case:DAT, PHON:ī; [$\square Num : PL$], [$\bullet np_{class1/2}$]

(31) Case:DAT, PHON:ibu; [$\square Num : PL$], [$\bullet np_{class3/4/5}$]

(35) Case:ABL, PHON:∅; [$\square Num : PL$], [$\bullet np$]

Dat PL = Abl PL

In Neuters, Nom = Acc

2nd Declension Neuter

Case/Num	SG	PL
Nominative	regn-u-m-∅	regn-a-∅
Accusative	regn-u-m-∅	regn-a-∅
Genitive	regn-ī-∅	regn-ō-r-um
Dative	regn-o-μ-∅	regn-ī-s
Ablative	regn-o-μ-∅	regn-ī-s

4th Declension Neuter

Case/Num	SG	PL
Nominative	corn-u-μ-∅	corn-u-a-∅
Accusative	corn-u-μ-∅	corn-u-a-∅
Genitive	corn-u-μs-∅	corn-u-um-s
Dative	corn-u-μ-∅	corn-ibu-s
Ablative	corn-u-μ-∅	corn-ibu-s

3rd Declension Neuter c-stem

Case/Num	SG	PL
Nominative	caput-∅-∅	capit-a-∅
Accusative	caput-∅-∅	capit-a-∅
Genitive	capit-is-∅	capit-um-s
Dative	capiti-μ-∅	capit-ibu-s
Ablative	capit-e-∅	capit-ibu-s

3rd Declension Neuter i-stem

Case/Num	SG	PL
Nominative	animal-∅-∅	animāl-i-a-∅
Accusative	animal-∅-∅	animāl-i-a-∅
Genitive	animāl-is-∅	animāl-i-um-s
Dative	animāl-i-μ-∅	animāl-ibu-s
Ablative	animāl-i-μ-∅	animāl-ibu-s

2nd Declension Neuter

Case/Num	SG	PL
Nominative	regn-u-m-∅	regn-a-∅
Accusative	regn-u-m-∅	regn-a-∅
Genitive	regn-i-∅	regn-o-r-um
Dative	regn-o-μ-∅	regn-ī-s
Ablative	regn-o-μ-∅	regn-ī-s

4th Declension Neuter

Case/Num	SG	PL
Nominative	corn-u-μ-∅	corn-u-a-∅
Accusative	corn-u-μ-∅	corn-u-a-∅
Genitive	corn-u-μs-∅	corn-u-um-s
Dative	corn-u-μ-∅	corn-ibu-s
Ablative	corn-u-μ-∅	corn-ibu-s

'crowd'

vulg-us

vulg-us

vulg-ī

vulg-ō

vulg-ō

3rd Declension Neuter c-stem

Case/Num	SG	PL
Nominative	caput-∅-∅	capit-a-∅
Accusative	caput-∅-∅	capit-a-∅
Genitive	capit-is-∅	capit-um-s
Dative	capiti-μ-∅	capit-ibu-s
Ablative	capit-e-∅	capit-ibu-s

3rd Declension Neuter i-stem

Case/Num	SG	PL
Nominative	animal-∅-∅	animāl-i-a-∅
Accusative	animal-∅-∅	animāl-i-a-∅
Genitive	animal-is-∅	animal-i-um-s
Dative	animāl-i-μ-∅	animāl-ibu-s
Ablative	animāl-i-μ-∅	animāl-ibu-s

- (11) Case:NOM, PHON:s; [$\square Num : SG$], [$\bullet np_{+sigmatic}$]
- (13) Case:NOM, PHON:m; [$\square Num : SG$], [$\bullet np_{class2,+neut,-sigmatic}$]
- (14) Case:NOM, PHON: μ ; [$\square Num : SG$], [$\bullet np_{class4,+neut,-sigmatic}$]
- (42) Case:NOM, PHON: \emptyset ; [$\square Num : SG$], [$\bullet np_{class3,+neut,-sigmatic}$]
-
- (16) Case:NOM, PHON: \emptyset ; [$\square Num : PL$], [$\bullet np_{+neut}$]
-
- (18) Case:ACC, PHON: \emptyset ; [$\square Num$], [$\bullet np_{+neut}$]
-

In Neuters, Nom = Acc

Baerman (2004:861) Divergent Bidirectional Syncretism

	DEFAULT NEUTER 'war'	DEFAULT MASC. 'slave'	ACCUSATIVE IN <i>-us</i> 'crowd'
NOM SG	bell-um	serv-us	vulg-us
ACC SG	bell-um	serv-um	vulg-us
GEN SG	bell-ī	serv-ī	vulg-ī
DAT SG	bell-ō	serv-ō	vulg-ō
ABL SG	bell-ō	serv-ō	vulg-ō


TABLE 9. Latin second declension.

(Impoverishment can't get you this assuming that Acc includes Nom, and nor can MaS; but Rules of Referral can. DM and MaS have to treat neuter nominative/accusative *-m* and non-neuter accusative *-m* as accidentally homophonous.)

Note: 2 *-ms* needed (DM analysis would be in a similar position)

- 41 lexical items
- One hierarchy of projections
- Merge
- A checking-based version of Agree
- [Two deletion rules (Number Deletion Under Adjacency, N_F :PL Deletion in GenP)]
- One output constraint on spell out (Kinyalolo's Constraint Generalized)

Summary

- 
- ~~1. Rules of Exponence and the Elsewhere Condition~~
 - ~~2. Intro to Latin Declension and to MaS~~
 - ~~3. The (Syntactic Part of the) Fragment~~
 4. Commentary
 5. Conclusion

The Plan

- Captures the big Case metasyncretisms very cleanly, using the same basic strategy (a higher Case head is null and relatively unpicky as to class/number compared to the overt one below it).
- Also captures smaller Case syncretisms with a version of the same strategy.
- The claim that Latin does not have cumulative exponence of Case/Number (in the terminology of Matthews 1972) after all—it has overlapping exponence (a number marker, and a case marker that's sensitive to number).
 - This decomposition is at the very least interesting, and it might even be correct. While other views of morphology can accommodate it, it's striking that it never occurred to me to decompose the pieces in that way until trying to make MaS work forced me to.

The Positives

Collins & Ordóñez (2021:265, their (44)):

Syntactic account of metasyncretism between 2PL and 3PL in Latin American Spanish:

- a. Latin American Spanish dialects lack the 2PL pronoun *vosotros*, the 2PL clitic *os*, and 2PL possessive forms *vuestro/a/os/as*.
- b. It is not necessary to assume that there is a constraint of the form *2PL ruling out these forms, rather the relevant forms simply don't exist.
- c. 2PL and 3PL are syncretic in those dialects because reference to a plural addressee is only expressed with the imposter *ustedes*.
- d. There is no need for an impoverishment operation.

This is very different from the general strategy for dealing with case metasyncretism in MaS I have offered here.

Neutral/Negative?

Collins & Ordóñez (2021:265, their (44)):

Syntactic account of metasyncretism between 2PL and 3PL in Latin American Spanish:

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- c. 2PL and 3PL are syncretic in those dialects because reference to a plural addressee is only expressed with the imposter *ustedes*.
- d. There is no need for an impoverishment operation.

Contrast realizational approaches of various kinds, with their unified approaches to metasyncretism:

- Impoverishment (DM)
- Rules of Referral (modern Word-and-Paradigm Approaches)

Neutral/Negative?

- Forces adoption of a theory of Agree in which it can't feed exponence directly (bad idea: see Preminger 2021).
- Forces adoption of a theory of Agree in which failure to find a matching Goal crashes the derivation (bad idea: see Preminger 2014).
- The account of the Nom/Acc neuter syncretism relies on Strong Case Containment (Nom is contained in all other cases), but there's reason to prefer Weak Case Containment (neither Nom nor Acc contains the other, but other cases build on Acc—see Christopoulos and Zompì 2023).
- Missed generalization: Plural-seeking case markers are fewer in number and are in almost all instances less picky than their singular-seeking counterparts as to declension class and gender (smells like Impoverishment).
- The Bloat

The Negatives

- 41 Lexical Items
- There are 28 case markers, all but one of which has to mention what number marking they need, and most of which have to mention what gender and/or declension class features the NP must have.
- 22 non-zero accidental homophonies (the number of pairings for a group of 2 members is 1, for one of 3 members it's 3; for 6 it's 15.)
 - 2 [a]s
 - 6 floating moras
 - 2 [m]s
 - 2 [s]s
 - 2 [j]s
 - 3 [ī]s
- 13 distinct zeroes (=78 accidental homophonies)

The Bloat

A chalkboard with a black background and green borders. The formula is written in pink and green chalk. It shows the combination formula $\binom{n}{k} = \frac{n!}{k!(n-k)!}$. The n and k in the binomial coefficient are pink, while the n and k in the denominator are green. The exclamation marks are also green.

$$\binom{n}{k} = \frac{n!}{k!(n-k)!}$$

Image source:

<https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:prob-comb/x9e81a4f98389efdf:combinations/v/combinator-formula>

Thanks to Jon Barnes pointing me to the function I was grasping for.

Counting Accidental Homophonies
(n=the number of accidentally homophonous
morphemes; K = 2)

1. Neil sucks
2. Life without the Elsewhere Condition sucks

Possible Reasons for the Bloat

- (20) Case:GEN, PHON:j; [$\square Num : SG$], [$\bullet np_{class1}$]
(21) Case:GEN, PHON:ī; [$\square Num : SG$], [$\bullet np_{class2/5}$]
(22) Case:GEN, PHON:is; [$\square Num : SG$], [$\bullet np_{class3}$]
(23) Case:GEN, PHON:μs; [$\square Num : SG$], [$\bullet np_{class4}$]

- I have no doubt at all that more careful consideration could tighten the fragment up.
- Particularly, fewer syntactic lexical items would be needed if we could collapse some of them by assigning them a unified underlying phonological form.

Neil sucks

I ended up concluding that this wasn't a good idea for (20)-(21), nor for (22)-(23), but I could be wrong!

- (20) Case:GEN, PHON:j; [$\square Num : SG$], [$\bullet np_{class1}$]
(21) Case:GEN, PHON:i; [$\square Num : SG$], [$\bullet np_{class2/5}$]
(22) Case:GEN, PHON:is; [$\square Num : SG$], [$\bullet np_{class3}$]
(23) Case:GEN, PHON:μs; [$\square Num : SG$], [$\bullet np_{class4}$]

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Neil sucks

- (20) Case:GEN, PHON:j; [$\square Num : SG$] , [$\bullet npclass1$]
(21) Case:GEN, PHON:ī; [$\square Num : SG$] , [$\bullet npclass2/5$]
(22) Case:GEN, PHON:is; [$\square Num : SG$] , [$\bullet npclass3$]
(23) Case:GEN, PHON:μs; [$\square Num : SG$] , [$\bullet npclass4$]

- BUT: while this would reduce the absolute bloat, it would not reduce *relative* bloat: a realizational analysis would also benefit from any consolidation of underlying forms we might achieve.

Neil sucks



Life without the Elsewhere Condition Sucks

- If we keep the same hierarchy of projections, KCG etc, but redo the fragment with traditional Agree and Late Insertion regulated by the Elsewhere Condition, what do we end up with, and how does it compare to the MaS version of the fragment?
- There are many ways of trying this, I have tried just two. Here is a summary of my most recent attempt.

A Natural Question

- A DM version of the original fragment
- 16 elements in the narrow lexicon
- 25 Vocabulary Insertion Rules:
 - 2 zeroes (vs 13 in the original fragment).
 - 8 non-zero accidental homophonies (2 [a]s, 2 [s]s, 2 [j]s, 2 [ī]s, 2 [m]s, 3 floating moras).
- 1 constraint on case Impoverishment
- 12 Impoverishment Rules, 10 crucial pair-wise orderings.
- 1 Local Dislocation Rule

Counter-fragment 2.0


- The total number of individual postulates in the counter-fragment is greater than the corresponding part of the MaS fragment: 63 (actually 65, but I subtract two because of the Impoverishment rules, which obviate the need for the two Marking-for-Deletion rules in the MaS fragment), versus the MaS fragment's 41 lexical items.
- But the individual rules are much simpler on the whole than the MaS lexical entries are.
- There are also massive savings in terms of zeroes and non-zero accidental homophonies.
 - 13 zeroes in the original fragment, versus the counter-fragment's 2.
 - 22 non-zero accidental homophonies in the original fragment, to the counter-fragment's 8.
 - If zeroes are counted among the accidental homophonies, then the original fragment has 100 (13 CHOOSE 2 is 78) to the counterfragment's 9.

Counter-fragment 2.0

I am we are
you are you(se) are
{he/she/it} is they are

BE \leftrightarrow am / __T:pres,1sg
BE \leftrightarrow is / __T:pres,3sg
BE \leftrightarrow are / __T:pres,2sg
BE \leftrightarrow are / __T:pres,pl

**The Bloat is the Weight of
Living without the
Elsewhere Condition!**

- 
- ~~1. Rules of Exponence and the Elsewhere Condition~~
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 - ~~4. Commentary~~
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The Plan

- We've seen ways that MaS can capture all of the following:
 - Case (meta)syncretism
 - Secondary Exponence
 - Class-based allomorphy
- MaS predicts that metasyncretism has multiple distinct sources (no unified account across different domains; this could be good or bad).
- MaS pays for its eschewal of Rules of Exponence with (I think) unacceptable consequences for what the syntax has to look like (prominently, the nature of Agree).
- MaS pays for its eschewal of the Elsewhere Condition with Bloat.
- Panini knew what he was doing.

Conclusion

- We've seen ways that MaS can capture all of the following:
 - Case (meta)syncretism
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- MaS pays for its eschewal of the Elsewhere Condition with Bloat.
- Panini knew what he was doing.

Conclusion



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Image source:

<https://www.ebay.com/itm/155391016917>



Thanks for Listening!

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-

Bonus Material

Number Deletion Under Adjacency (adapted from Collins (2018:7, his (25))):

Structural Description: Num:PL or Num:SG

Structural Change: Mark the PHON feature of Num:PL/Num:SG for deletion

Condition: Num:PL/Num:SG is adjacent to a lexical item of category N_F with the same number value, and the PHON feature of N_F is not itself marked for deletion.

A Very General Deletion Rule

Number Deletion Under Adjacency (adapted from Collins (2018:7, his (25))):

Structural Description: Num:PL or Num:SG

Structural Change: Mark the PHON feature of Num:PL/Num:SG for deletion

Condition: Num:PL/Num:SG is adjacent to a lexical item of category N_F with the same number value, and the PHON feature of N_F is not itself marked for deletion.

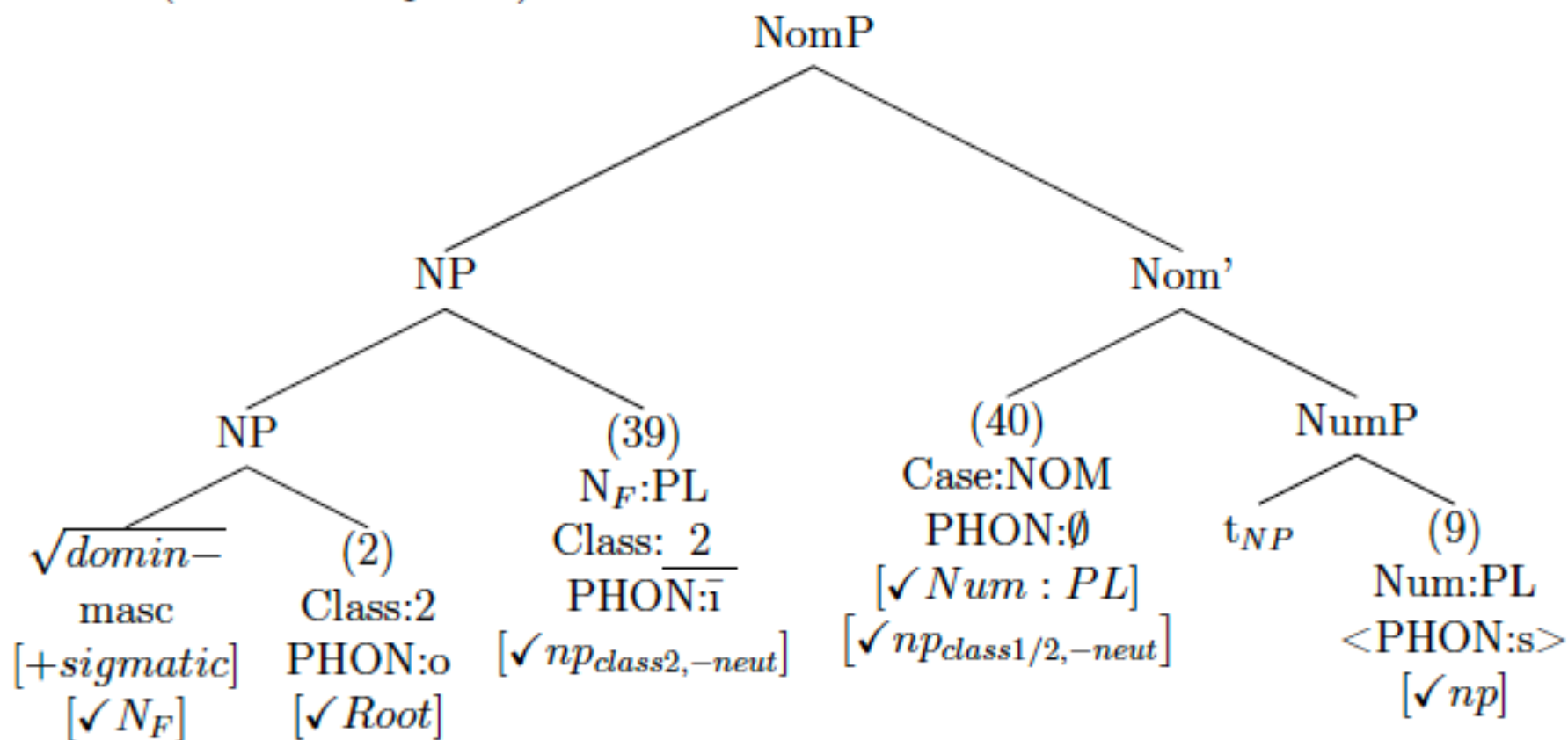
Adjacency

X is adjacent to Y iff for all Z such that X precedes Z and Z precedes Y, the PHON attribute of Z has the value \emptyset , or Z is a copy of a moved item marked for deletion.

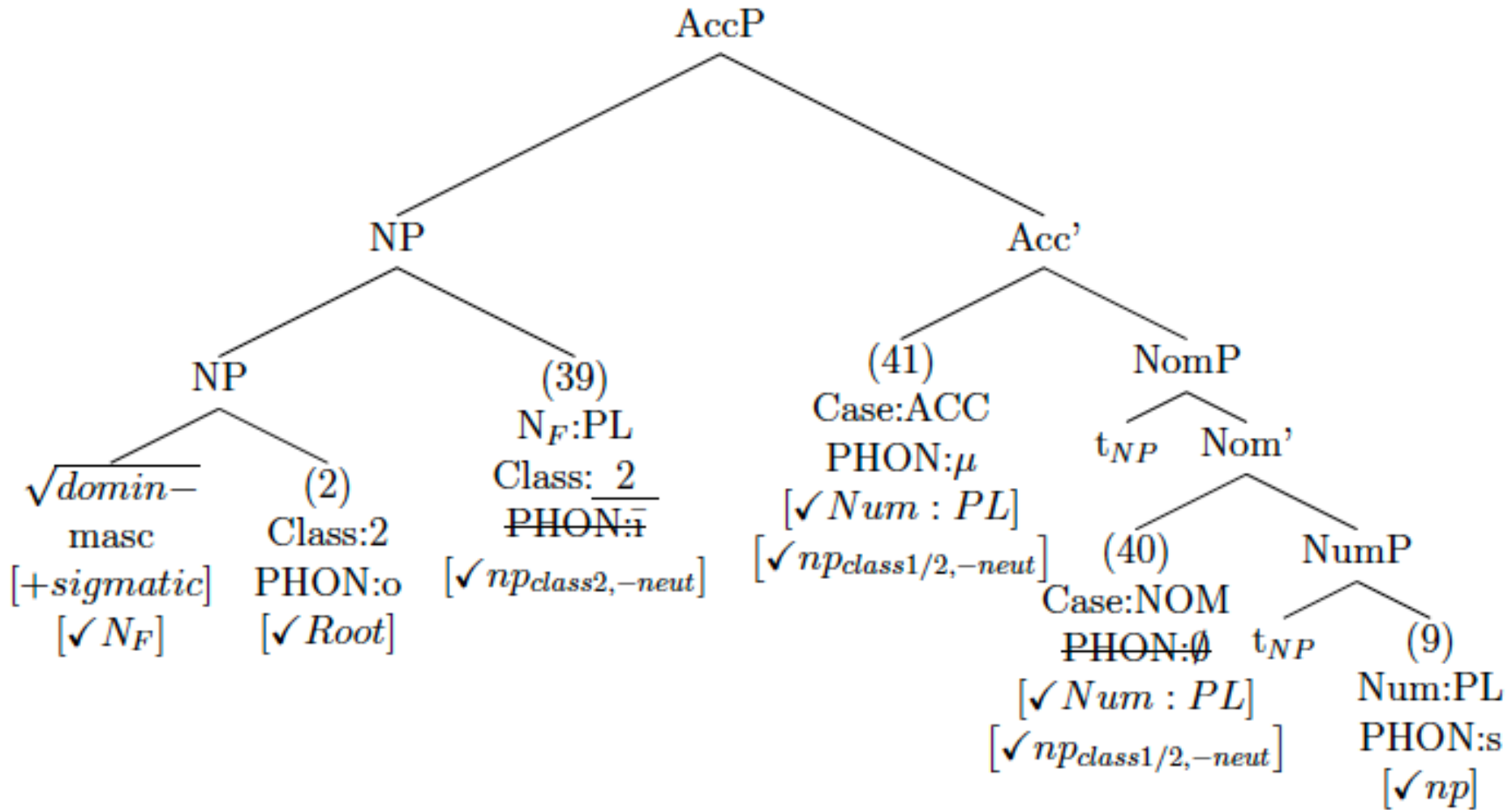
A Very General Deletion Rule

Example: 2nd Declension Non-Neuter Plurals

dominī (nominative plural)

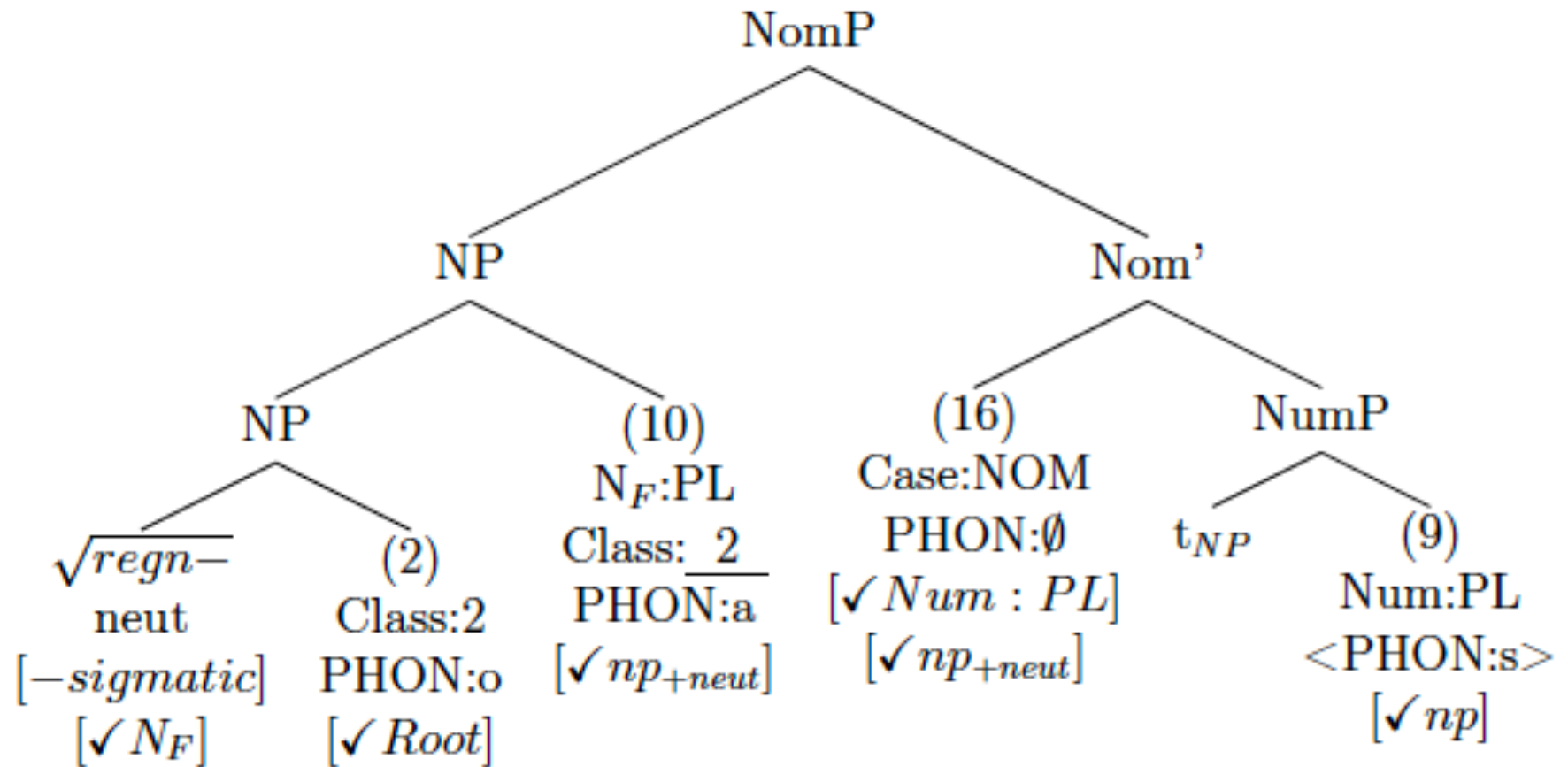


dominōs (accusative plural)

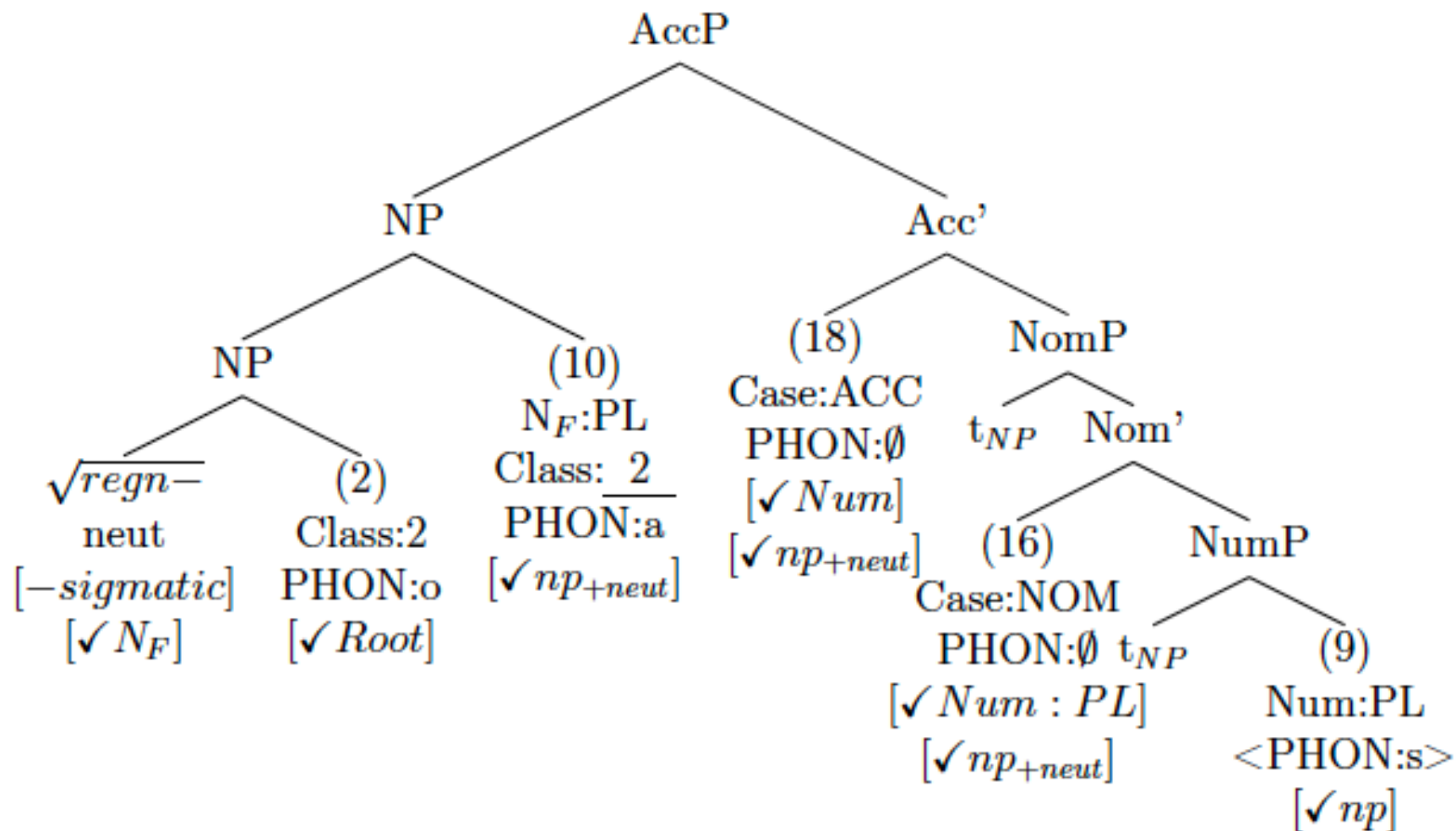


Another Example: 2nd Declension Neuter Plurals

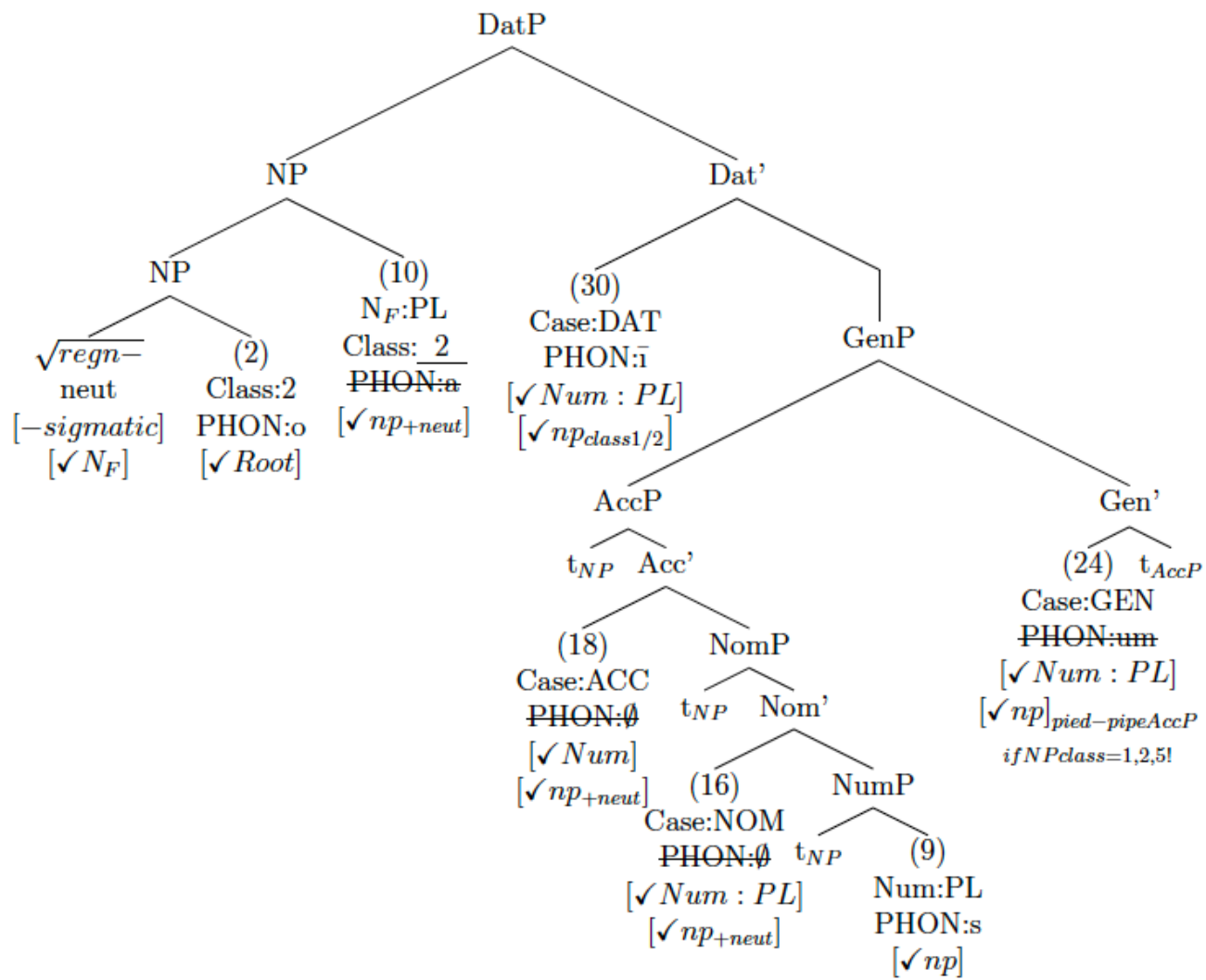
regna (nominative plural)



regna (accusative plural)



regnīs (dative plural)



A very specific and stipulative deletion rule

N_F:PL Deletion in GenP

Structural Description: N_F:PL

Structural Change: Mark the PHON feature of N_F:PL for deletion

Condition: The highest copy of N_F:PL is dominated by GenP.

Highest Copy

The highest copy of X is the one which asymmetrically c-commands all other copies of X.

**A very specific and
stipulative deletion rule**

N_F:PL Deletion in GenP

Structural Description: N_F:PL

Structural Change: Mark the PHON feature of N_F:PL for deletion

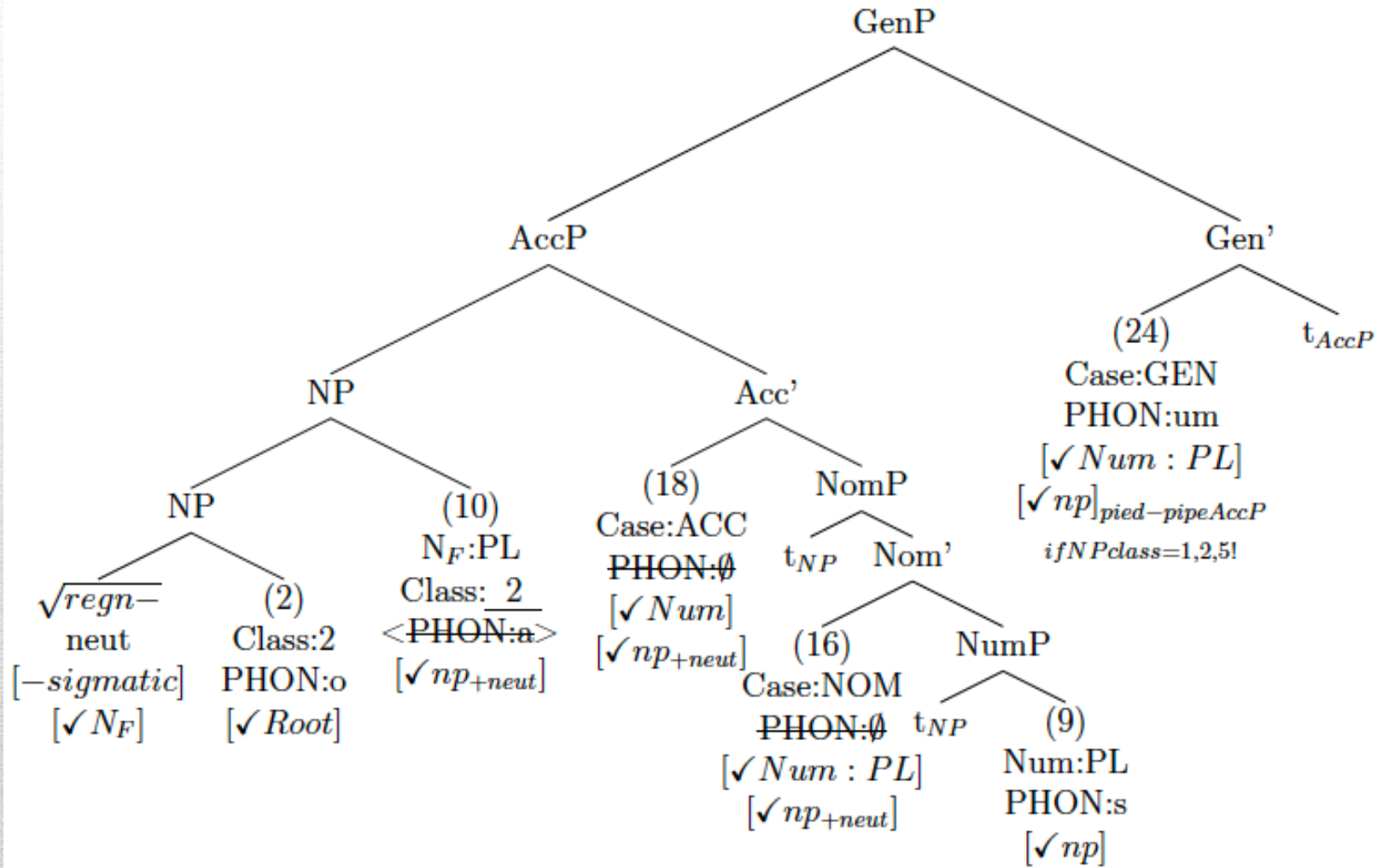
Condition: The highest copy of N_F:PL is dominated by GenP.

Highest Copy

The highest copy of X is the one which asymmetrically c-commands all other copies of X.

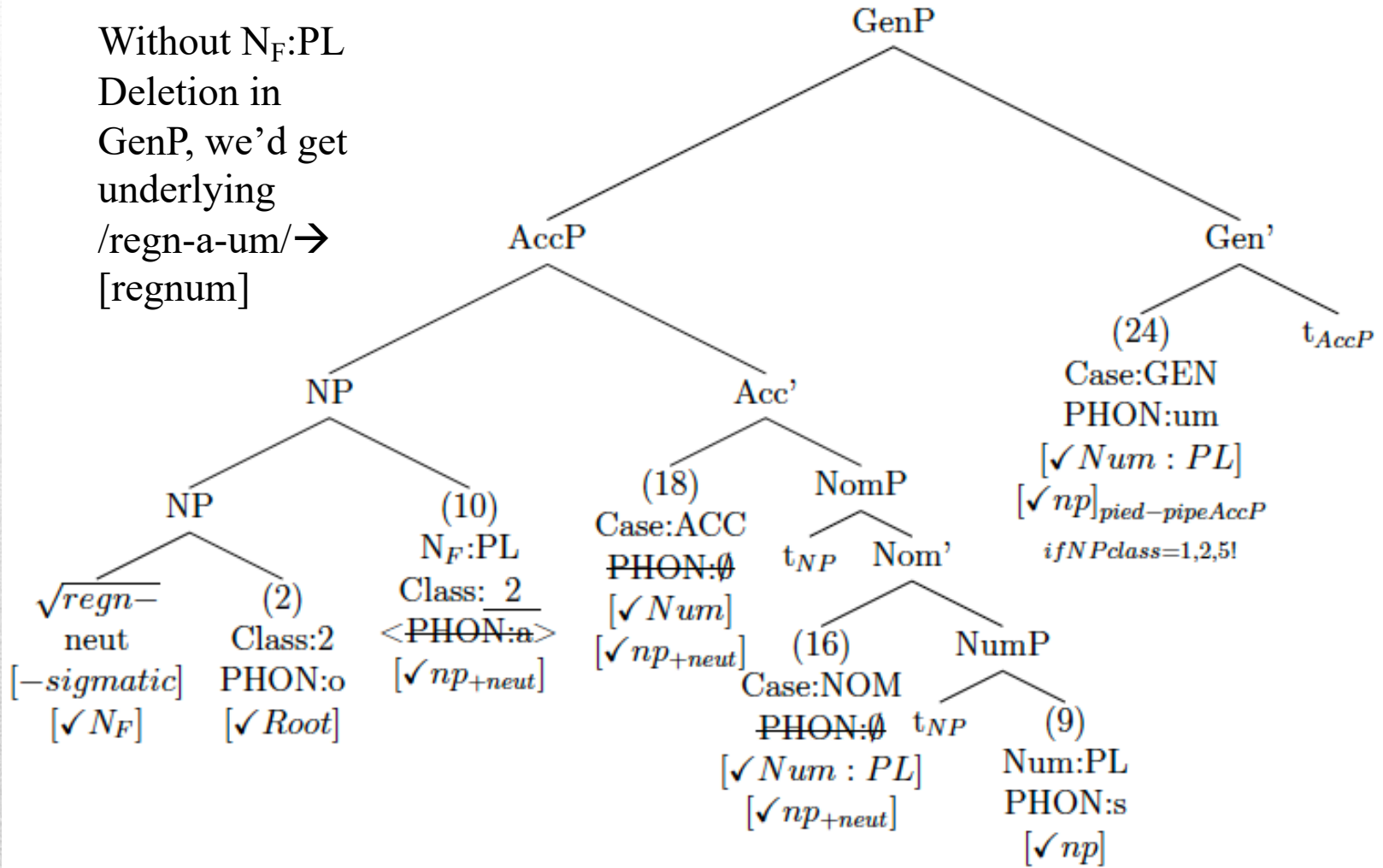
**(Only needed because of 2nd
declension neuter genitive
plurals)**

regnōrum (genitive plural)



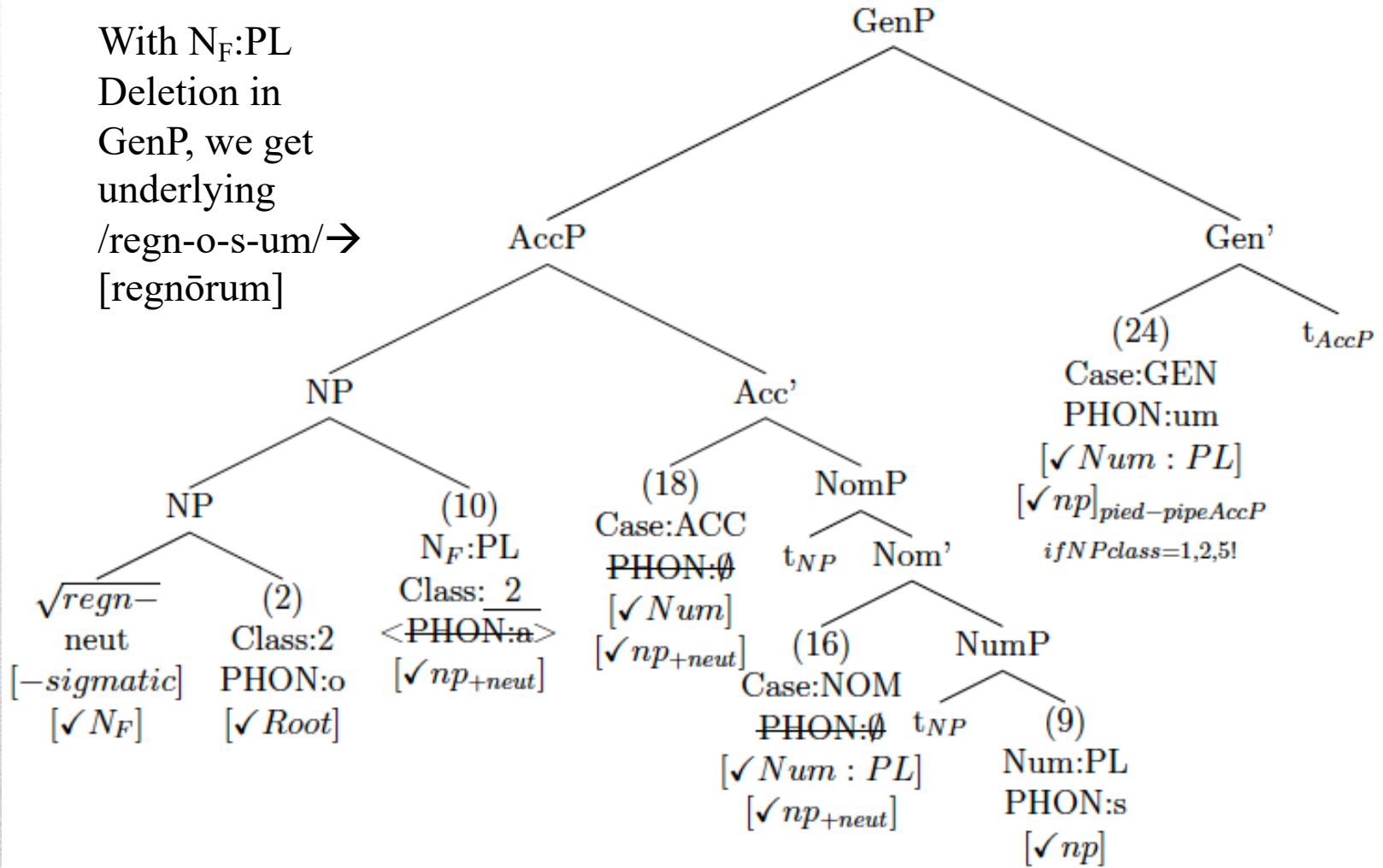
regnōrum (genitive plural)

Without N_F:PL
 Deletion in
 GenP, we'd get
 underlying
 /regn-a-um/ →
 [regnum]



regnōrum (genitive plural)

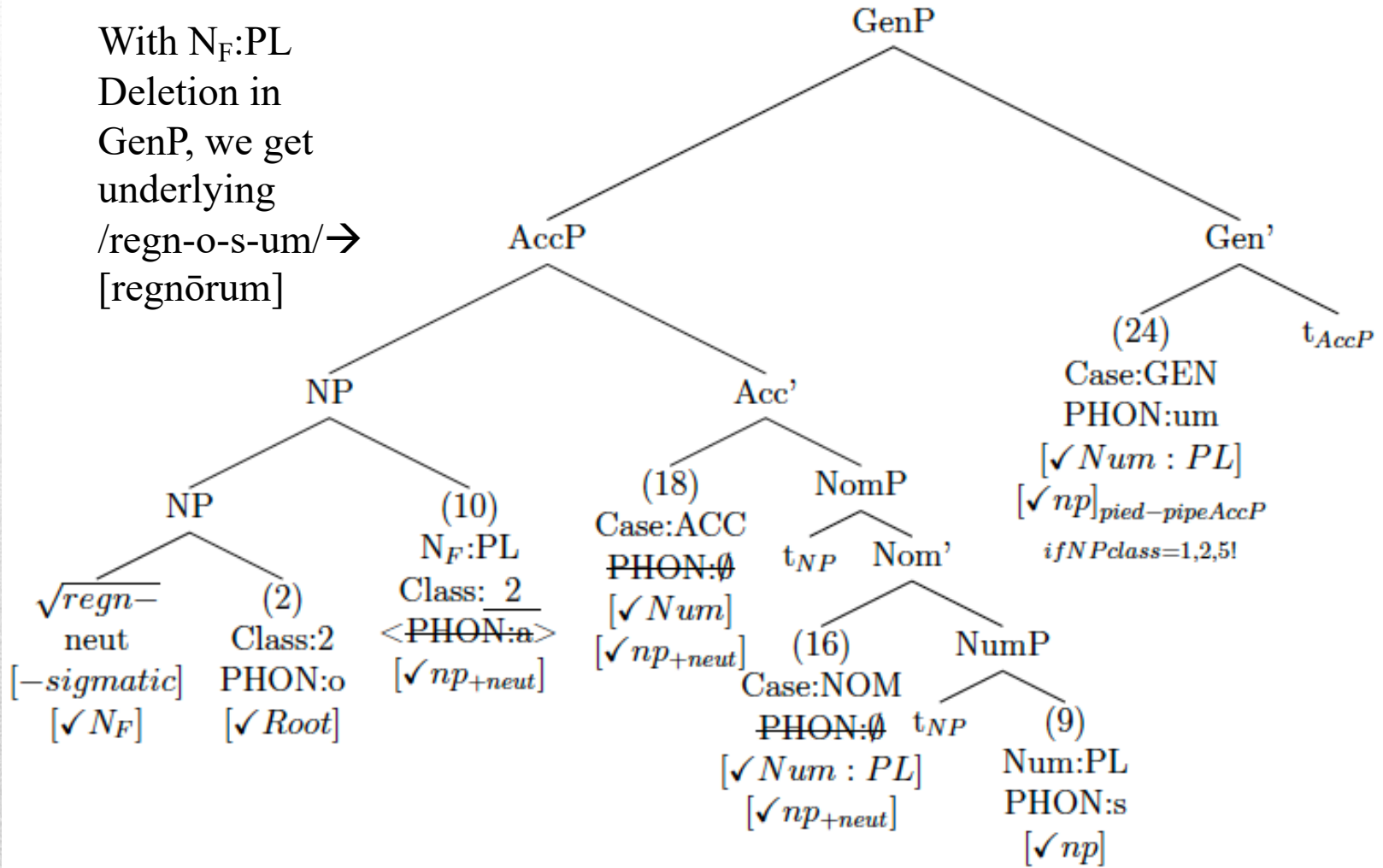
With $N_F:PL$
 Deletion in
 GenP, we get
 underlying
 /regn-o-s-um/ →
 [regnōrum]



regnōrum (genitive plural)

$N_F:PL$ Deletion in $GenP$ bleeds *Number Deletion Under Adjacency*, so the regular plural surfaces.

With $N_F:PL$ Deletion in $GenP$, we get underlying /regn-o-s-um/ → [regnōrum]



- Dative Singular and Ablative Singular (2nd declension, 4th declension neuters; sometimes 3rd declension neuters)
- Genitive Singular and Dative Singular (1st and 5th Declensions)
- Nominative Plural and Accusative Plural (Non-Neuters in the 3rd, 4th, and 5th declensions)

Sundry Smaller Syncretisms

1st Declension

Case/Num	SG	PL
Nominative	puell-a- \emptyset	puell-a-j- \emptyset
Accusative	puell-a-m- \emptyset	puell-a- μ -s
Genitive	puell-a-j- \emptyset	puell-ā-r-um
Dative	puell-a-j- \emptyset	puell-ī-s
Ablative	puell-a- μ - \emptyset	puell-ī-s

2nd Declension

Case/Num	SG	PL
Nominative	domin-u-s- \emptyset	domin-ī- \emptyset
Accusative	domin-u-m- \emptyset	domin-o- μ -s
Genitive	domin-ī- \emptyset	domin-ō-r-um
Dative	domin-o- μ - \emptyset	domin-ī-s
Ablative	domin-o- μ - \emptyset	domin-ī-s

3rd Declension c-stem

Case/Num	SG	PL
Nominative	rēg-s- \emptyset [rēks]	rēge- μ -s
Accusative	rēge-m- \emptyset	rēge- μ -s
Genitive	rēg-is- \emptyset	rēg-um-s
Dative	rēgi- μ - \emptyset	rēg-ibu-s
Ablative	rēg-e- \emptyset	rēg-ibu-s

3rd Declension i-stem

Case/Num	SG	PL
Nominative	turr-i-s- \emptyset	turre- μ -s
Accusative	turr-i-m- \emptyset	turr{-i-/e}- μ -s
Genitive	turr-is- \emptyset	turr-i-um-s
Dative	turr-i- μ - \emptyset	turr-ibu-s
Ablative	turr-i-{- μ /e}- \emptyset	turr-ibu-s

4th Declension

Case/Num	SG	PL
Nominative	stat-u-s- \emptyset	stat-u- μ -s
Accusative	stat-u-m- \emptyset	stat-u- μ -s
Genitive	stat-u- μ s- \emptyset	stat-u-um-s
Dative	stat-u-ī- \emptyset	stat-ibu-s
Ablative	stat-u- μ - \emptyset	stat-ibu-s

5th Declension

Case/Num	SG	PL
Nominative	r-ē-s- \emptyset	r-ē- μ -s
Accusative	r-e-m- \emptyset	r-ē- μ -s
Genitive	r-ē-ī- \emptyset	r-ē-r-um
Dative	r-ē-ī- \emptyset	r-ē-bu-s
Ablative	r-ē- μ - \emptyset	r-ē-bu-s

- The syncretisms highlighted on the preceding slide can be dealt with using exactly the strategy for Classical Armenian sketched in Collins (2020): a higher Case head happens to be null.
- The null higher Case heads in these instances are somewhat picky as to number and/or declension class, which is what makes them “smaller” (i.e., not meta-).

Sundry Smaller Syncretisms

