

**The Nanosyntactic prediction that each language can only have
one declension class containing gender doublets is false**

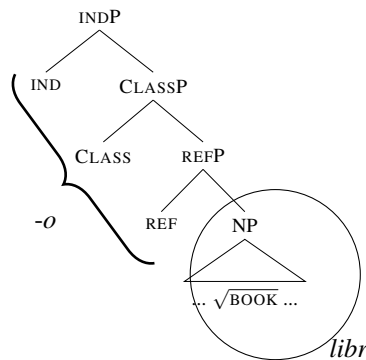
Introduction: the nature of representations for declension class. Declension classes are generally accepted both to be **syntactically inert** (Svenonius 2006: 12; Svenonius 2017: 15; Harley & Blanco 2013: 117; Kramer 2015: 234; Gouskova & Bobaljik 2022: 1090, i.a.), and to **lack consistent semantic** correlates (Harris 1991; Müller 2004a,b; Noyer 2005; Williams et al. 2020, i.a.). Most Separationist theories of morphosyntax thus treat the declension class membership of a given noun *not* as a combinatorically relevant syntactic fact, but rather as a diacritic “proport[y] of [a] Vocabulary Item, the phonological exponents inserted at the end of the syntactic derivation” (Harley & Blanco 2013: 117). Since a declension class (e.g., Italian class II¹) is just a language-specific grouping of Vocabulary Items ($\{\text{/libr/}$ for $\sqrt{\text{BOOK}}$, /man/ for $\sqrt{\text{HAND}}$, ... $\}$) that triggers a shared set of inflectional allomorphs ($\{-o$ singular, $-i$ plural $\}$) — a “classification...[that is] irrelevant to syntax” (ibid.), these classes are modeled with meaningless, language-specific, purely morphological features active “only in the selection of allomorphs expressing inflectional features” (Svenonius 2006: 12).

<i>Some Italian masculines</i>	book	problem	witness (man)	baby (boy)
II	II	IV	III	VI
singular [IND]	(il) libr- o	(il) problem- a	(il) testimon- e	(il) baby- \emptyset
plural [IND + GROUP]	(i) libr- i	(i) problem- i	(i) testimon- i	(i) baby- \emptyset

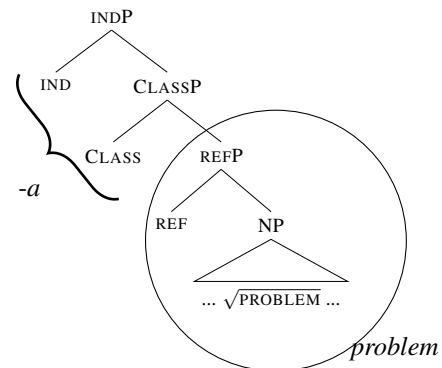
However, this poses an architectural challenge to strongly universalist theories like Nanosyntax, which require that “all features relevant for morphological phenomena are **syntactic** features by definition [emph. mine]” (part of Caha 2019: 8’s “*No Morphology...feature of Nanosyntax*”), and furthermore “maintain the idea that [all] morphosyntactic features are drawn from a set provided by the UG,” “which (by definition) would have to be language invariant” (Caha 2021b: 1; Caha 2019: 22; see also Caha 2021a,b: §1.2). In Nanosyntactic work, purely morphological features with no semantic definition (or syntactic presence) are cause for concern and should be excluded axiomatically.

Caha 2021: “declensions without declension features”. Accordingly, Caha (2021a) aims to “eliminate language-particular declension *features*” while reconciling “the existence of language-particular classes...with a universal set of features” (406). He does this by introducing additional syntactic material in *between* the Root, and the inflectional feature(s) that actually vary for class (i.e. IND for singular number, and both IND and GROUP for plural, in these Italian examples). Specifically, above each Root, appearing in every single noun derivation, is the feature REF, as all nouns are referential (following Harley & Ritter 2002). Additionally, above that, “nouns of all genders will be given the feature CLASS, while feminine nouns add the feature FEM” (Caha 2021a: 391). Nanosyntax’s phrasal spellout allows these intervening syntactic heads to be pronounced together with other syntactic terminals (Starke 2009); indeed, the difference between the root-affix pairings found in one declension class and those in another is simply a matter of “trading off” that additional syntactic material between Root pronunciations and inflectional affix pronunciations.

(1) a. Italian Class II (masculine) singular



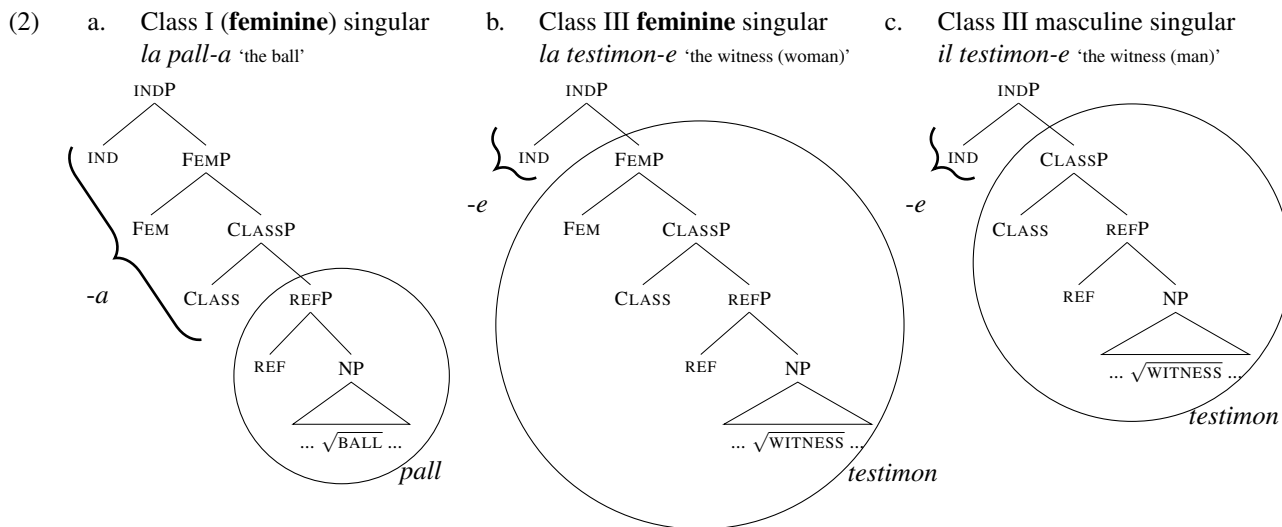
b. Italian Class IV (masculine) singular



For example, in Italian, Class IV Roots like $\sqrt{\text{PROBLEM}}$ have pronunciations that (on top of their actual lexical content) *additionally* spell out the meaningful REF feature (1b), whereas Class II Roots like $\sqrt{\text{BOOK}}$ do not (1a). There are complementary pronunciations for number affixes like the singular: Class IV *-a* is realized by a lexical item that *doesn't* spell out that same REF feature (1b), and Class II *-o* *does* (1a). In this way, Caha (2021a) is able to meet his theoretical commitment to using semantically meaningful features to instantiate declension class alternations — but really, heads like REF and CLASS are present in order to provide an additional notch in the fseq between Roots and the number region of the fseq, for lexically specific declensions of number values to differentiate themselves from others.

¹Italian class numbering follows Acquaviva (2009). The Nanosyntactic analyses of Italian presented throughout are in the spirit of Caha (2021a)'s general approach to declension, which he demonstrates with Russian.

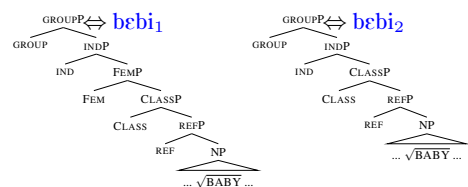
A prediction: no more than one gender-agnostic “default” declension class. However, hanging one’s account of declension class on semantically meaningful features — including, specifically, the contrastively present FEM **gender** feature — makes empirically falsifiable predictions. Using a privative gender feature as the *highest* notch before the inflectional region of the syntactic fseq predicts limits on possible relationships between gender and declension class. Specifically, this account predicts that all declension-class-specific lexical entries will be *restricted* to a single gender, except for a *single* set of default, gender-agnostic inflections.



Consider the syntactic representation of **feminine** singular nouns, as in (2a) or (2b), vs. masculine singular nouns, as in (2c) or either structure in (1). Feminines differ from masculines in that their syntactic structures obligatorily include a FEM head between the invariably present CLASS head below and the base of the number region (i.e. IND) above. But in order to match the masculine structures in (1), both of the singular lexical trees (which included *at least* CLASS) had to lack FEM: including the crucial sequence of CLASS directly below IND ensures that those lexical entries will never be able to match any feminine syntactic trees. Instead, feminine structures must either have their number regions be lexicalized *with* FEM — as with the Class I *-a* lexical entry matched in (2a); or have number exponents that are restricted to *only* spelling out the number features from IND and up, as in (2b).

In other words, all number lexical entries — except for ones that stop precisely at the base of the number region, IND — *bake in* a particular gender value (by either including or excluding the gender-differentiating FEM head). Only the Class III *-e* singular in (2b)–(2c) can combine freely with nouns with or without the FEM head: that is, with *either feminine or masculine*² nouns. This analysis allows for only one declension class that can be gender agnostic — it only allows for one set of default number inflections that can apply regardless of gender.

Italian indeclinable gender doublets refute the Nanosyntactic approach to declensions. The existence of Italian Class VI same-root different-gender indeclinables like ‘baby’ (*la/le/il/i baby-∅*) falsify this prediction. When a baby is known to be a girl, it receives feminine agreement. This means that the syntactic representation of those nouns includes the FEM feature. One option for analyzing the invariable (or lack of) inflection is to propose a maximal superset lexical entry covering the entirety of the fseq, from the Root, through the FEM feature, all the way to the topmost GROUP number feature, as in the left. However, this lexical entry tree will not be a superset of any syntactic



representation for a baby boy, due to the lexical entry tree’s FEM feature. In order to capture the plural and singular of the masculine (FEM-less) forms of ‘baby’ (*i/il baby-∅*), we will need to additionally propose a second, homophonous lexical entry, as on the right.

The only way to avoid this state of affairs would be to split both the feminine and masculine forms into two separate pronunciations. One lexical entry would cover the fseq up until the point of divergence between the masculine and feminine syntactic structures, including the FEM feature so as to be able to match either gender. A separate null number marker, starting at IND, would have to then take over in both singular and plural trees — but of course, that would have the exact same lexical tree as was proposed for the Class III plural *-i*.

In conclusion, Caha (2021a)’s attempt to remove declension class features results in a problematic analysis of straightforward empirical facts. This Nanosyntactic approach cannot accommodate more than one declension class with same-Root doublets of different genders, which can be found even in the simplest inflection systems (e.g. Italian).

²Even though there is no FEM feature in the masculine syntactic structure in (2c), a superset lexical entry for /testimon/ (circled in (2b)) can be inserted just fine under Nanosyntax’s SUPERSET PRINCIPLE (Starke 2009; Baunaz et al. 2018; Caha 2009).

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