Why nominative is special:
Stem allomorphy and case structures

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In this talk I will look at instances of stem alternations in nominal inflection in a series of languages, along the lines of Latin *hom-ō*, *hom-in-is* 'man' (Nom, Gen).

☞ All of them involve allomorphy of a stem-forming element that is at least partly conditioned by case.

☞ I will propose and defend the generalization that nominative has a unique status among the cases for such alternations.

☞ Then I will develop an analysis in terms of context-sensitive exponence of little n, which allows us to probe into the structural representation of case, and of the nominative in particular.

1   An introduction to the pattern from Tamil

The morphology of Tamil generally follows a typical agglutinative pattern, and the nouns are no exception:

- Case and number markers are clearly segmentable, and essentially the same case-markers attach to all nouns (with some minor differences based on animacy).

- The stems the case-markers attach to are also mostly constant, aside from the application of regular rules that ensure phonological well-formedness.

- So in *panju* 'cotton', a *-u* is epenthesized in the nominative to satisfy the ban on word-final obstruents, while in *ammaa* 'mother' an epenthetic *v* is inserted before the vowel-inital case suffixes to avoid hiatus.

	'boy'	'cotton'	'mother'
Nom	payyan	panju	ammaa
Acc	payyan-ai	panj-ai	ammaav-ai
Dat	payyan-ukku	panj-ukku	ammaav-ukku
Inst	payyan-aale	panj-aale	ammaav-aale

However, some nouns show more interesting alternations:

	'tree'	'house'
Nom	maram	viiḍu
Acc	maratt-ai	viiṭṭ-ai
Dat	maratt-ukku	viiṭṭ-ukku
Inst	maratt-aale	viiṭṭ-aale

- A large class of nouns including *maram* 'tree' end in *-am* in the nominative, but replace this with *-att-* before all of the case endings.

- Another class including *viiḍu* 'house' geminate their stem final ḍ outside the nominative (triggering phonologically regular devoicing).

- Crucially, these alternations do not correspond to regular phonological rules in the language and have no synchronic phonological motivation.

- Rather, at least descriptively we must recognize distinct morphological stems.

Beyond their relevance for a treatment of Tamil morphophonology, why should these alternations interest us?

☞ It turns out that similar patterns of stem allomorphy dependent on case are found in a series of languages.

☞ Crucially, there is an apparent generalization characterizing how the allomorphs are distributed when case is the deciding factor:

    (1) **Nominative stem-allomorphy generalization (NSAG)**
        When there is stem allomorphy based on case, it distinguishes the nominative from all other cases.

☞ To the extent that this generalization is accurate, it should tell us something about the morphosyntactic structures involved in case-marking.

2　Morphological vs. phonological alternations

The NSAG in 1 is not meant to apply to any old change in the form of a stem, but specifically to stem allomorphy, i.e. morphological alternations.

☞ We can get a better idea of this distinction by looking at some Finnish patterns.

Finnish is also highly agglutinative in its inflectional morphology, as exemplified e.g. by the (very abbreviated) declension of *talo* 'house' in the first column below:

	'house'	'street'	'person'
Nom	talo	katu	ihmi-nen
Gen	talo-n	kadu-n	ihmi-se-n
Part	talo-a	katu-a	ihmi-s-tä
Iness	talo-ssa	kadu-ssa	ihmi-se-ssä

But as the other two example nouns show, we also find examples of stem alternations. However, the two examples here show crucially different properties:

katu **'street'** reflects a pervasive morphophonological alternation in Finnish known as 'consonant gradation'.

> ☞ CG is found in verbal and other paradigms as well as nominal ones, so we might not expect it to have anything directly to do with case or nominal stems.

> ☞ The effects of the alternation can be characterized fairly easily in phonological terms – in this case a difference of voicing, in others of gemination or frication.

> ☞ Its triggering environments can be characterized in (essentially) phonological terms: we get the weak variant (here *d*) in the onset of a closed syllable and the strong one (here *t*) in the onset of an open one.[1]

ihminen **'person'** on the other hand does not reflect any independently motivated morphophonological alternation.

> ☞ The pattern here is fairly common, but it is restricted to the declensions of a specific class of nouns.

> ☞ The difference between *-nen* and *-se-* is not easily described in terms of a phonological rule.

> ☞ There is no phonological characterization of the triggering for the two variants. Rather, it depends on the morphosyntactic features of case and number.

The interesting thing to note then is that the only alternations in Finnish that would seem to violate the NSAG are ones of the *katu* type, never those of the *ihminen* type.

> ⇨ In other words, if an alternation splits up case forms in some way other than what 1 predicts, it seems to be because it is actually phonologically implemented rather than being true stem allomorphy.

> ⇨ Genuine morphosyntactically implemented stem allomorphy always puts the split between the nominative and everything else.

Deciding whether a particular alternation is phonological or morphosyntactic is of course not a simple matter in general. In the course of the talk, I will make the distinction increasingly precise, but the basic intuition is as follows:

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[1]This is a (not entirely innocent) simplification. See e.g. Karlsson (1995) for details.

☞ We have to distinguish stem allomorphy from phonological readjustment of stem material. Only the former is governed by the NSAG.

☞ For me, **allomorphy** implies that two (or more) distinct exponents alternate for insertion in a single node, conditioned by the morphosyntactic context, rather than a single exponent which is subsequently modified by phonological operations.

☞ The term stem is used descriptively, on the one hand to contrast with root suppletion of the *go/went* type, and on the other to make it clear that the allomorphy involves a sub-part of the noun base rather than the case (or number) suffix.

☞ So, again descriptively, in a form like G *ihmisen*, we have a root *ihmi-* (which also appears in the N form *ihminen*), followed by a stem-formative allomorph *-se-* (which alternates with *-nen*), followed by a case-marker *-n*.

☞ In a form like G *kadun*, other the other hand, we have the same underlying stem *katu-* found in N *katu* etc., but with the application of a phonological rule voicing the final consonant, then followed by the case-marker *-n*.

3 Case or endinglessness?

Note now that in the Tamil and Finnish examples we've seen, the nominative is distinct from all other cases in that it does not involve an overt case ending.

☞ So based on what we've seen so far, it could be that stem allomorphy tracks not grammatical case categories, but the simple presence of an overt suffix.

☞ In this scenario, it would be able to tell us nothing about the structure of case beyond what we can alread see from its surface morphophonological manifestation.

While this may be the correct characterization of some alternations, more data from Tamil and Icelandic (and later Latin) make it clear that it cannot be the general answer. Consider first Tamil again:

• For most nouns, there are two distinct forms that can be used in what we might think of as genitive contexts:

  1. A form bearing an overt suffix *-ooḍa*, sometimes called the 'Sociative'

  2. A form with no overt suffix, but crucially with the non-nominative stem form

• So we find the following doublet:

  (2) mara-tt-ooḍa elai
       tree-OBL-GEN leaf
       'the tree's leaf'

(3) mara-tt elai
     tree-OBL leaf
     'the tree's leaf'

- If the 'oblique' stem depended on the presence of an ending, we could make no sense of its appearance in 3.

- But if it depends on non-nominative case, we can analyze 3 as having an underlying genitive case which triggers the oblique stem, but happens to have a null exponent.

Icelandic furnishes a different kind of argument that stem alternations depend on morphosyntactic categories and not on the presence of morphophonological endings:

- In many noun classes in Icelandic, the nominative singular is marked with an overt ending, e.g. *-ur*. At the same time, the accusative singular is often endingless.

- So the word for 'horse', which is a member of the largest inflectional class of masculine nouns, is *hestur* in the nominative singular, but *hest* in the accusative.

⇨ So we simply cannot equate endinglessness with nominative in the language.

Nonetheless, in nouns that show irregular stem alternations like *maður* 'man', we again find the nominative distinguished from all other cases:

	'horse'	'man'
Nom	hest-ur	mað-ur
Acc	hest	mann
Gen	hest-s	mann-s
Dat	hest-i	mann-i

☞ As with the word for horse, we have an overt ending *-ur* in the nominative singular, but here it attaches to an irregular stem form *mað-*.

☞ All other cases are built on *mann-*, crucially including the endingless accusative.

4   The lessons of the Latin 3rd declension

Consider now some nouns of the Latin 3rd declension:

	'chief'	'stone'	'man'	'old man'	'name'	'kind'	'journey'
Nom	prīncep-s	lapi-s	hom-ō	senex	nōmen	gen-us	it-er
Acc	prīncip-em	lapi-d-em	hom-in-em	sen-em	nōmen	gen-us	it-er
Gen	prīncip-is	lapi-d-is	hom-in-is	sen-is	nōmin-is	gen-er-is	it-iner-is
Dat	prīncip-ī	lapi-d-ī	hom-in-ī	sen-ī	nōmin-ī	gen-er-ī	it-iner-ī

prīnceps 'chief' is a regular masculine noun of this declension.

☞ Note that there is an overt *-s* ending in the nominative.[2]

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[2]The alternation between *e* and *i* in the second syllable, seen also in *nōmen*, is phonologically regular.

lapis 'stone' has the same endings, but shows a stem alternation – a stem-final *d* appears only outside the nominative. This, however, can be understood in terms of a regular synchronic phonological rule:

- All masculine and feminine nouns of the 3rd declension with stems ending in a coronal stop show this alternation, without exception.

- The deletion of the stem-final coronals occurs in a phonologically defined environment, immediately before *-s*.

- The expected form **lapid-s* would involve a consonant cluster that is otherwise unattested in Latin, and presumably disallowed by its phonology.

- Other contexts where such a cluster would be expected are also affected by deletion of the *d*, e.g. *rīsī*, perfect of *rīdeō* 'laugh', derived from *rīd-* + *-sī*.

⇨ So we can understand the stem-alternation as the result of a regular rule deleting coronal stops immediately before *s*.

Consider then the declension of *homō* 'man'.

- The oblique forms have the regular endings for a masculine noun of the third declension, added to a stem *homin-*, but the nominative is *homō*.

- The precise analysis of the nominative is tricky, but it must involve an irregular stem plus an irregular ending, either *hom-* plus *-ō*, or *homō-* plus null.

Unlike with *lapis*, there's no way we can say that it's built from the regular stem *homin-* with the surface alternation derived phonologically:

☞ If we assumed that it had the regular nominative ending *-s*, so that it would underlyingly be *homin-s*, we have no reason to expect that the *n* and the *s* would be deleted, since Latin allows final *-ns* clusters (e.g. *mīrāns* 'admiring').

☞ If we assumed that it were (exceptionally for the 3rd declension) endingless, hence underlyingly *homin*, there would be no reason that the *n* would be deleted – indeed, 3rd declension neuter nouns are (like most neuters) endingless in the nominative, and they surface with the final *n*, as e.g. *nōmen* 'name'.

☞ Under either assumption, even if we could find a reason to delete the consonant(s), there is no regular source for the final *ō* that surfaces.

⇨ So *homō* is an example of an alternation of the relevant kind, with a stem alternation that is morphosyntactically triggered, and it conforms to the NSAG.

Now, one could argue that the *homō* alternation depends on endinglessness, but this won't work for *senex* 'old man':

- Here we find in the oblique cases the regular set of endings attaching to a stem *sen-*, but the nominative form *senex* involves a different one.

- The form should be analyzed as having the regular nominative ending *-s* attached to a stem *senec-*, yielding the cluster /ks/, rendered as *-x* in Latin orthography. Compare regular nouns of this class like N *carnifex* A *carnificem* 'butcher'.

- But as those regular nouns show, there is no regular phonological (or other) process that would lead to the deletion of the *-ec-* stem element in the oblique cases,[3] so we must recognize here a case of morphosyntactically triggered stem alternation.

- Furthermore, since the nominative clearly has the regular *-s* ending, the trigger must be the distinction in case categories, not the presence or absence of a suffix.

The neuter nouns of the third declension provide examples of further interest. *nōmen* 'name' shows the regular declension without stem alternation, which is like the masculine in the G and D, but endingless in both the N and A.

genus 'kind' shows the first interesting alternation. This is a member of a fairly large class of neuter nouns with alternating *-us-/-er-* stems.

- ☞ These nouns end in *-us* in both N and A, which again cannot be a case-ending, but must rather be the termination of the stem.

- ☞ In all other cases, however, they replace *-us* with *-er-* and then suffix the regular case terminations.

- ☞ The change from *s* to *r* is historically the result of a phonological rule that applied in intervocalic position in Old Latin, but it cannot be a synchronic one in the Classical language, given the existence of forms like *carbasus* 'flax'.

- ☞ So the alternation here must be a morphological one.

The same point can be made even more clearly with the noun *iter* 'journey'. It ends in *-er* in the N and A, but replaces this with *-iner-* in the oblique cases, to which the regular case endings are added.

- ☞ It is clear that this cannot be the result of any synchronic phonological process (indeed, it's the reflex of an old stem alternation that is clearly not phonological as far back as we can reconstruct it to PIE).

What's especially interesting about these neuters, though, is that the alternation doesn't exactly respect the NSAG as I've stated it. Rather than splitting the N from everything else, they put the A with the N, apart from everything else.

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[3]Though again we do get the phonologically regular *e/i* alternation.

☞ There is something systematic going on here, however, in that in these cases, the A doesn't just share the same stem as the N, it is invariably fully syncretic with it.

☞ And this is not an accidental syncretism either: in Latin (as in all Indo-European languages), the N and A are universally syncretic in neuters.

☞ So the NSAG in 1 should be updated as follows:

(4) **Nominative stem-allomorphy generalization (NSAG, version 2)**
When there is stem allomorphy based on case, it distinguishes the nominative (along with any cases systematically syncretic with the nominative) from all other cases.

5   What might this mean?

I'll spend the rest of the talk looking at what the NSAG might be able to tell us about the mechanisms of stem allomorphy and the structure of case, but before we get to that, a major caveat is in order:

☞ So far I have tested the generalization on a rather small sample of languages.

This has two principled reasons:

1. Stem allomorphy conditioned by case seems to be relatively uncommon – I have actually considered a far larger number of languages, but found that the vast majority have no relevant stem alternations.

   ☞ I am on the hunt for more languages showing relevant alternations, especially non-Indo-European ones, and would greatly appreciate any suggestions in this area from the audience.

2. In order to distinguish the morphosyntactic alternations that are of interest from the phonologically triggered ones that are not, one needs to have a reasonably good understanding of the morphophonology of the language in question.

   ☞ So a quick survey of large numbers of languages, e.g. using existing databases like WALS, doesn't do the trick – a careful analysis of each language and alternation is required.

Nonetheless, based on the languages I have been able to analyze,[4] the NSAG is quite well supported, with a series of consistent alternations and no clear counterexamples.

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[4]In addition to the languages discussed so far, (Tamil, Finnish, Icelandic and Latin), I have also looked at Estonian (on which see below), Northern Saami, Sanskrit, Ancient Greek, Gothic and Russian.

⇨ Thus it is worth considering here how we might explain it, and considerations along these lines will help to determine what exactly we should be looking for in subsequent empirical work to test the generalization more widely.

Assuming for now that the NSAG does hold more generally, it is entirely possible that it reflects markedness relations or the output of likely pathways of change, rather than principles of synchronic grammar:

- The nominative is special in being arguably the least marked case in typically nominative-accusative systems, and unmarked environments tend to show more irregularity than marked ones.

- Furthermore, most stem alternations are the historical wreckage of old phonologically motivated alternations. Because it is so often endingless, the nominative may be special in creating phonologically marked configurations subject to deformation.

- So the NSAG might just be reflex of the combination of these two factors: irregularity is most likely to arise by sound change in the nominative in the first place, and then most likely to be retained there due to markedness.

This type of explanation predicts that the NSAG should be a tendency, not a categorical generalization, because there is nothing directly banning irregular stems outside the nominative.

☞ So if further work turns up a series of clear counterexamples which don't submit to alternative explanation, this kind of approach may be on the right track.

However, since such counterexamples have not yet turned up, I will pursue the more interesting possibility that the NSAG falls out of something grammatical.

☞ This is more interesting precisely because it means that we can use the stem-alternations to probe into the structure of case-marked nouns and into the formal principles that constrain allomorphy.

Let's start by getting an idea of the abstract patterns we find. To simplify things but still get the logic clear, we can restrict ourselves to a toy three-case system, with N, A and G.

☞ Here are the logically possible patterns of stem distribution, with A, B and C representing distinct stems:

	AAA	ABB	AAB	ABA	ABC
N	A	A	A	A	A
A	A	B	A	B	B
G	A	B	B	A	C

☞ The NSAG says that only AAA and ABB are possible, unless A is systematically syncretic with N, in which case AAB is also possible. ABA and ABC impossible.

We can break down the consequences of the NSAG in terms of each of these different stem patterns:

✓**AAA:** The lack of alternation is our default expectation, hence uninformative.

✓**ABB:** The fact that alternation according to case is possible at all is informative. It tells us that at least some case markers are in a configuration with the noun stem that satisfies locality restrictions on allomorphy.

✓**/*AAB:** The normal case of this being ruled out tells us that the nominative is somehow special, with the exceptionally possible ones in Latin providing some extra information about its relationship with the accusative.

*ABA: This is the kind of pattern that people working on syncretism have been so excited about in recent years, because it suggests that the categories involved are in a kind of structural containment relationship, as argued e.g. by Caha (2009), Bobaljik (2012).

*ABC: To the extent that this is robust, it might tell us something about locality and the structure of case categories.

6 Consequences for the structure of case

Laying things out in this way suggests a comparison with Bobaljik (2012)'s careful study of suppletion in comparative and superlative forms of adjectives cross-linguistically. He draws the following generalization:

(5) **The Comparative-Superlative Generalization (CSG)**
If the comparative degree of an adjective is suppletive, then the superlative is also suppletive (i.e. with respect to the positive). If the superlative degree of an adjective is suppletive, then the comparative is also suppletive (i.e. with respect to the positive). (Bobaljik 2012, p. 2, formatting mine)

In other words, we get patterns like 6a, but not the equivalents of 6b or 6c:

(6) a.   good – better – best
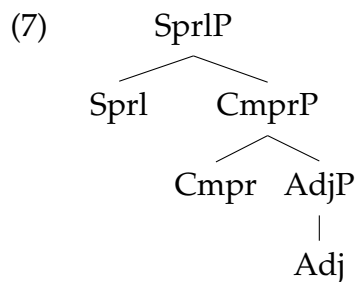   b. * good – better – goodest
     c. * good – gooder – best

Note that this is essentially parallel to (at least part of) what I've described for stem alternations according to case above.

☞ We again find ✓ABB, *ABA, *AAB.

☞ There are differences with respect to ABC and the wrinkle with the AAB pattern, which I'll come back to.

So, how does Bobaljik explain the CSG?

- He assumes a version of DM, so that crucially comparative and superlative morphology realize pieces of syntactic structure.

- He proposes that the syntactic structure underlying the superlative **contains** the structure underlying the comparative, essentially the following:

(7)
```
              SprlP
             /     \
         Sprl      CmprP
                  /     \
               Cmpr     AdjP
                          |
                         Adj
```

- Any rule for suppletion of the Adjective root that makes reference to the presence of the Cmpr node will thus also be able to apply in a superlative structure. So suppletive comparative → suppletive superlative.

- Further assumptions about the locality of contextual specifications for suppletion ensure that suppletive superlative → suppletive comparative.

- Bobaljik actually considers a few different ways to derive this, but the crux of it is that Sprl can't trigger suppletion across the intervening Cmpr node unless Cmpr itself has already triggered something special (i.e. suppletion).

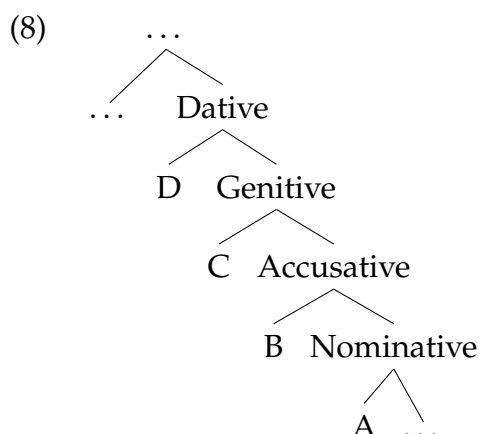So, can we develop an analysis of the NSAG that works along similar lines?

☞ We'd need to set up a containment relationship involving the structure of the nominative and the other cases, analogous to that between the positive, comparative and superlative of an adjective.

☞ Crucially, the nominative will have to have a structure that is somehow special in order to get it to have a special stem form.

I see two promising ways to achieve this.

1. The first idea is to say that, while case in general is represented structurally as a syntactic head, say Lamontagne and Travis (1987)'s K, nominative DPs/nouns lack this head entirely.

- This is an implementation of the often proposed idea that nominative is the total lack of case (see Bittner and Hale 1996, Asbury 2008, McFadden and Sundaresan 2010, Kornfilt and Preminger to appear, among many others).

- The stem allomorphy we have seen would then be sensitive not to the content of K, but to whether it is present at all. This provides a binary distinction between the nominative and all others.

2. The second idea builds on Caha (2009)'s proposal that case categories represent hierarchical structures in a containment relationship, as in 8 (abbreviated):

(8)

```
            …
          /    \
        …      Dative
              /    \
            D      Genitive
                  /    \
                C      Accusative
                      /    \
                    B      Nominative
                          /    \
                        A      …
```

- Now deriving the special status of the nomniative against all other cases is a matter of defining the relevant locality conditions so that most of the case-distinguishing heads are too far away to condition allomorphy in the stem.

- Specifically, allomorphy should be able to see up to the B head distinguishing Acc from Nom. This will be able to trigger special stem allomorphs in the Acc, but also in all the other cases, since B is present in them as well.

- Crucially, allomorphy should **not** be able to see higher than B, so no more specific allomorph triggered by, say, B+C in the genitive, will be possible.

Deciding between these alternatives will ultimately depend on the strength of the evidence for *ABC and certain details of our theory of the locality of allomorphy.

- I won't come down definitively one way or the other here, though the subsequent discussion will have some relevant considerations.

- Note, in any case, that with some slight modifications, we can actually combine the two alternatives if we assume Caha's structures, except that there is no A head, so that the 'nominative' really is the lack of case-related heads.

7   The structure of stem suppletion

Now, however, we need to consider the relevant structure below the case markers, where the alternations actually take place.

☞ Note, crucially, that what Bobaljik was concerned with was **root** suppletion, where the form of the entire adjective alternates in comparatives and superlatives – *worse*, e.g. has nothing phonological in common with *bad*.

☞ Here, on the other hand, we're concerned with **stem** suppletion, where a basic part of the noun (the root?) remains constant across the cases, and only what we might call a stem-forming element alternates.

Typological generalizations identified e.g. by Moskal (2013) show that this difference is actually quite significant:

• Root suppletion in nouns based on **number** is reasonably well-attested, e.g. the Ket word for 'child', sg. *dyl'*, pl. *kat*.

• However, root suppletion in nouns based on **case** is essentially unattested (with the few exceptions having a principled explanation).

Moskal argues that this difference is an effect of locality:

• She handles suppletion simply as allomorphy of the exponent inserted in the Root node, and assumes a structure for nouns as in 9:

(9)

```
              ╱╲
             ╱  K
            ╱╲
           ╱  #
          ╱╲
       Root  n
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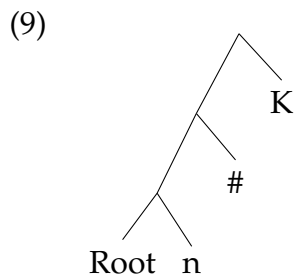
• She then proposes a locality condition on vocabulary insertion with the effect that insertion at the Root node can be sensitive to n and #, but not K.

• For present purposes an oversimplified version will suffice, where allomorphy can see across one node, but not across two.

An argument in favor of this analysis is the fact that, unlike nouns, pronouns cross-lingustically show extensive suppletion for case in addition to number.

• Consider e.g. the paradigms for the 1st person singular in Latvian and Tamil:

	Latvian	**Tamil**
Nom	es	naan
Dat	man	en-akku
Acc	man-i	en-ai

- Given Moskal's structure for pronouns in 10, where the pronominal base is in D, it is correctly predicted that suppletion be sensitive to K, because there is no little n, thus only the single # head intervenes.

(10)

```
        /\
       /  \ K
      /\
     D  #
```
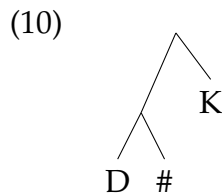
This framework can now provide a nice background for us to analyze the alternations we've been concerned with here in terms of stem suppletion rather than root suppletion.

- ☞ Considering again Moskal's structure for nouns, remember that vocabulary insertion at the Root node cannot be conditioned by K, because two other nodes – little n and # – intervene.

- ☞ On the other hand, by the same simple locality metric, K should be able to affect the choice of forms to insert in little n, since only the # node intervenes.

- ⇨ We can thus suppose that the case-sensitive stem alternations we've been looking at boil down to case-sensitive allomorphy for little n.

In addition to getting the basic locality facts right, this seems to fit in well with the nature of the elements that typically engage in the alternations:

- That is, in most of the examples discussed here, the alternation is characteristic of a whole group of nouns, which constitute a stem-class.

- E.g. Tamil has a very large and productive class of nouns in *-am*, all showing the alternation with *-att-*; Finnish has several nouns showing the *-nen/-se-* alternation, and Latin has hundreds of nouns that inflect like *homō*.

- Thus it makes a lot of sense to take these stem formatives to realize functional material that is involved in implementing or even deriving a nominal structure.

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8   Lessons from plurals

Coming back now to the question of how exactly the nominative is special, there is actually evidence, at least for most of the languages we have looked at, for the idea that it involves a lack of structure. The crucial data come from the plural:

	Finnish		Latin	
	Sg	**Pl**	**Sg**	**Pl**
Nom	ihmi-nen	ihmi-**se**-t	hom-ō	hom-**in**-ēs
Gen	ihmi-**se**-n	ihmi-**s**-i-en	hom-**in**-is	hom-**in**-um

- In Finnish, Latin and Icelandic, the plural forms have the 'non-nominative' stem throughout, even in the nominative.

- A simple way to make sense of this is if the alternations in little n are not sensitive to case per se, but to whether a further node is present in the complex head structure.

- This only works though, if the nominatives have no (active) case head(s), and the singulars have no (active) # head, so we would have structures like the following:

	Sg	**Pl**
Nom	Root-n	Root-n-#
Gen	Root-n-K	Root-n-#-K

For these languages, then, the Caha-style elaboration of the case structures is not necessary, at least to deal with the allomorphy effects:

☞ Allomorphy of little n is sensitive to the presence of case heads, but not to their content, so an ABC pattern would have no way to arise.

On the other hand, the plural facts are crucially different in Tamil:

	Sg	**Pl**
Nom	mar-am	mar-aŋ-gaḷ
Acc	mar-att-ai	mar-aŋ-gaḷ-ai

- The entire plural has the stem form found in the **nominative** singular.[5]

- This suggests that the *-att-* allomorph of little n is really sensitive to case, not to the presence of any old syntactic head, and that the dependency is blocked somehow by intervention of the # marker in the plural.

Again, a comparison with the pronouns supports a locality view on this blocking. Consider the Tamil 2nd person singular and plural pronouns:[6]

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[5]With phonologically regular assimilation of the stem-final nasal to the initial stop of the plural suffix.

[6]Similar patterns are found in the 1st person (exclusive) forms and the anaphor.

	Sg	**Pl**
Nom	nii	niiŋ-gaḷ
Acc	on-ai	oŋ-gaḷ-ai
Gen	on	oŋ-gaḷ
Dat	on-akku	oŋ-gaḷ-ukku

- We have a case-based suppletion here, with *nii(n)* in the nominative and *on-* in all other cases.

- What is especially interesting is that the same alternation is found in the both the singular forms and the plural forms, where the plural suffix intervenes between the pronominal base and the case markers.

- However exactly we formulate the locality conditions, we see again that pronouns are more permissive, showing evidence for fewer locality boundaries, while nouns are more strict.

9   Morphologically triggered ≠ allomorphy

The analysis of stem allomorphy in terms of distinct exponents of little n allows us to be more precise about what kinds of alternations should actually be subject to the NSAG.

- The initial discussion of Finnish *katu* and Latin *lapis* above made it clear that an alternation that has a phonological trigger is indeed phonological, hence not subject to the NSAG.

- However, this does not mean that a morphosyntactic trigger implies the opposite about an alternation. The analysis proposed here implies that what matters is the **implementation** of the alternation.

☞ If the alternation must be implemented in terms of allomorphy of little n, it will be subject to the NSAG.

☞ But if it is implemented in terms of a phonological element or process, even if this is morphosyntactically triggered, the NSAG is not expected to apply.

The pattern of gradation in Estonian, which is historically related to the Finnish *katu* pattern, but synchronically different, illustrates this nicely. Consider the word for 'story':

Nom	jutt
Acc	jut-u
Gen	jut-u
Part	jutt-u

- On the surface, we have an alternation that does not respect the NSAG, with one stem *jutt-* found in the N and P, and a different one *jut-* in the A and G.

- Sound changes eroding various prehistoric final segments have obliterated the phonological motivation for the alternation, so the simple story we told for Finnish consonant gradation won't work here.

- Rather, it seems that the alternation must indeed be sensitive to the morphosyntactic identity of the case.

Note, however, that the effect of the alternation can be quite straightforwardly understood as a phonological process:

☞ As in Finnish, the difference between the two stems amounts to either lengthening or shortening of the stem-final consonant, depending on which variant is taken to be basic.

☞ This means that it need not be analyzed in terms of (essentially suppletive) allomorphy for little n.

Indeed, Caha (2009) (developing ideas from Prince 1980, and others), proposes an account based on arguments having nothing to do with constraints on stem syncretism, that happens to avoid any problems for the NSAG:

- The basic form of the noun involves the long consonant, and this surfaces unchanged in the nominative.

- The accusative and genitive are syncretic, consisting of a simple marker *-u*, while the partitive marker consists of *-u* plus a floating mora.

- There is then a phonological rule shortening the long consonant of the noun when it is pre-vocalic, which operates in the accusative and genitive. In the partitive, however, this shortening is blocked by the need to accommodate the floating mora.

Analyses in a similar spirit can arguably deal with a number of superficially problematic stem alternations, like the more complicated consonant gradation facts in Northern Saami (Svenonius 2008), Ablaut-type alternations in Sanskrit and Ancient Greek (see Johnston 1996, for data) and Umlaut-type alternations in the (old) Germanic languages.

☞ The general strategy is to have the exponence of certain nodes consist of or include floating, underspecified material (morae, C or V slots, etc.) that is accommodated autosegmentally.

☞ This can derive the appearance that a phonological process is being triggered by a morphosyntactic category or environment (Bye and Svenonius 2012).

Note, incidentally, that Estonian has the same kind of alternation as we saw in Finnish *ihminen*, e.g. in the cognate *inimene*, which again cannot be implemented in terms of a phonological operation, and again respects the **NSAG**:

Nom	inimene
Acc	inime-se
Gen	inime-se
Part	inime-se-t

10   AAB iff syncretism

One remaining issue that I'd like to briefly discuss is the wrinkle to the *AAB pattern that we get when the accusative is syncretic with the nominative, as in the Latin neuters.

- The problem here is that the conditions for the 'oblique' stems like *gener-* and *itiner-* seem to be able to distinguish between accusative and genitive.

- However, under neither of the analyses discussed above should this be possible – either the specific identity of the case of a noun is not visible, or the heads that distinguish cases beyond accusative are not sufficiently local.

- And indeed, we should be suspicious that the AAB stem pattern never seems to be attested except when the accusative is syncretic with the nominative.

This last point I think makes clear where we should look for an explanation:

☞ One way or another, the idea should be that, with these nouns, what shows up in syntactic contexts where we expect the accusative are structurally speaking nominatives, at least at the point when the exponent for little n is inserted.

☞ In other words, the 'accusatives' here also lack syntactic case projections, and therefore they do not satisfy the conditions for the oblique alternant of little n.

☞ One way to achieve this would be in terms of something like impoverishment, so that these nouns would initially be structurally accusative, but would have the relevant head deleted or pruned before vocabulary insertion.

☞ Another idea might be to assume a kind of Differential Object Marking, so that accusative case assignment rules would simply not apply to nouns of the relevant classes, leaving them caseless, which is equivalent to nominative.

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