

Appendix B: Against a gapping analysis

In the Nanosyntactic literature, bi-directional morphological containment has previously been analyzed as the result of *gapping* (see e.g., Márkus 2015, Wyngaerd et al. 2020, Caha et al. 2021). Crucially, gapping analyses operate without the need for lexical items with complex left branches. Here, I will argue that while such lexical items may allow for an account of the distribution of number marking, they are not sufficiently rich in structure to simultaneously offer an account of the form of number, i.e., the allomorphy discussed in section 3.2. The argument I will advance here, essentially boils down to this: A theory of allomorphy under which all allomorphy is due to differences in spellout targets (i.e., one in which there is no true non-phonologically conditioned allomorphy) cannot be a successful theory of spellout unless it includes lexical items with complex left branches.¹

A gapping analysis of the basic three classes would look roughly like the following. First, assume that the functional sequence is minimally enriched by some head X, as in (69).

(69) xNP > SG > (PL) > X > TH

Second, assume that the three classes correspond to vocabulary items along the lines of (70).

(70) a. [xNP] ⇔ root_{sg-pl-marking}
 b. [X [SG [xNP]]] ⇔ root_{pl-marking}
 c. [X [PL [SG [xNP]]]] ⇔ root_{sg-marking}

In standard fashion, roots that mark both singular and plural do so because they lexicalize neither SG nor PL (70a), and roots that mark only the plural do so, because they lexicalize only SG, but not PL (70b). In each case, some affix has to spell out the features not lexicalized by the root VI. The *gapping* part comes in at (70c), the singular-marking roots: In the plural, such a VI can spell out the whole XP. However, in the singular, where the PL head is absent, the same VI can not spell out X, because [X[SG[xNP]]] is not a tree that is contained in the lexicalized tree. Note however, that such a root VI can still spell out the singular structure [SG[xNP]]. The head X, however, must be spelled out by an affix in the singular, even though it is spelled out by the root VI in the plural: The appearance of singular marking arises.

Such an analysis can account for the presence or absence of number marking. However, it runs into trouble when it comes to simultaneously determining the form that number marking takes, i.e., the allomorphy facts discussed in section 3.2. For the singulative marking, I will argue that it does not offer the ability to state that HUMAN is a necessary condition for the appearance of *-iin*, while not being sufficient. For the plural marking, I will argue that a gapping account does not provide sufficient degrees of freedom in the vocabulary item itself to encode the plural allomorph, forcing an account in terms of different functional sequences, even where there is independent reason to believe that such an account is unwarranted.

Let me elaborate the singulative first: As we saw in section 3.2, there are two singulative suffixes, *-yaan* and *-iin* (71-72).

(71) a. puun-**yaan**-ta-it → pùunyáat b. puun-i-ik → pûuníik
 enemy-SG-TH-SEC enemy-TH-SEC
 ‘enemy (SG) ‘enemies (PL)

¹ Note that the argument here is essentially internal to Nanosyntax. I will assume that a gapping analysis can make reference to *backtracking*, a last resort operation that undoes previous operations in case no match can be found, and recursively attempts the next derivational option for the previous step (e.g., undoing spec to spec movement on the previous cycle and attempting comp to spec movement instead). Such an operation allows higher heads to change the configuration in which lower heads are spelled out. See Starke (2018) for details.

- (72) a. sig-**iin**-ta-it → sìgìindét
 parent-SG-TH-SEC
 ‘parent (SG)’
- b. sig-i-ik → sìgíik
 parent-TH-SEC
 ‘parents (PL)’

While the *-yaan* has a kind of elsewhere distribution, the latter occurs only with human-denoting nouns. Crucially, however, it does not occur with all human-denoting nouns – human-denoting is a necessary condition for the occurrence of *-iin*, but not a sufficient one. I have shown that this is exactly the expected behavior if a root VI can lexicalize HUMAN in either the left branch or the right branch: Only in the latter case is it available for partial overwrite by the singulative suffix.

A gapping analysis without lexical items with complex left branches makes no such device available, since the lexical items cannot vary along a dimension such as the f-seq “breaking point”, instead it would have to advance a theory where HUMAN is sometimes spelled out by the root VI, and sometimes by the singular affix. While such a system is a possibility in principle, it does not lend itself to an extension of the gapping analysis of singulatives. To see why, let us consider the possible place of our feature HUMAN in the f-seq (with the obvious constraint that it must be sufficiently local to X to be spelled out together with it). The first possibility is that it is above X, in which case we expect *all* human-denoting nouns that combine with a singulative suffix to take *-iin*: The premise of the gapping analysis is that X, not being matched by the root VI in the singular, is the actual target of the singulative suffix – that is, it necessarily separates the structure spelled out by the root VI from higher material, and thus the root VI cannot be responsible for the difference. If HUMAN is merged in between the number structure and X, the same logic applies: Since it is the absence of PL that bleeds the singulative-marking roots from spelling out material above number, such roots would always fail to spell out HUMAN in the singular, and consequently, we’d expect it to be relevant to the spellout of X in the singular across the board. This leaves us with the option that HUMAN is merged in a place lower than the number structure. From the absence of plural marking, we know that the relevant nouns can spell out all features below PL, and hence, the roots would be able to spell out HUMAN in both the singular and the plural, and hence it should never be relevant to singular-marking. To sum up, the analysis I proposed above gives the root the ability to determine whether HUMAN is interpreted by an affix or the root, even if the root *principally* has the ability to spell out HUMAN on its own (as evidenced by the unmarked plural). In contrast, a gapping analysis without lexical items with complex left branches offers no such way to encode the information as a structural property of the root VI, and any consistent place for a feature HUMAN on the f-seq results in the false prediction that singular marking should be sensitive to HUMAN either in all cases or no cases.

A similar issue arises in the allomorphy of plural marking. As above, the theory I advanced allows the root to induce particular configurations of the features below PL through its f-seq “breaking point”, and it is the root-induced configuration of these features that conditions the plural allomorphy. However, no such claim is possible in a gapping analysis, which cannot link such allomorphy to lower features, or a particular root VI. Consider the nouns that mark only the plural in Kipsigis: Since they spell out the singular without an affix, they must be able to spell out the singular structure, and in case of a gapping analysis, the hypothetical X (since not being able to spell out X is how singulative marking arises). Hence, all allomorphs of plural should, in principle, be anchored at PL (or, if there is backtracking, the highest head that any PL-lexicalizing suffix can be anchored at). Consequently, it cannot be the structure of the root VI that gives rise to the allomorphy – it must be heads above PL that do so, and these roots are blocked from spelling out any features merged on top of PL. In essence, then, we would have to postulate that every plural allomorph arises because there is a unique functional sequence that gives rise to that particular allomorph, i.e., there would be structural differences between nouns in the region above number. Not only does this strike me as a particularly bad version of an analysis that involves declension class features in the syntax, but it is also questionable empirically, insofar as there are minimal

pairs where we have reason to believe that their thematic domain (the domain for which there is independent evidence suggesting that it is immediately above number) is in fact identical, despite them having different plural allomorphs. Consider the examples in (73), which show that both *oosn* ‘forest’ and *saa* ‘buffalo’ combine with the thematic suffix *-a* in the unmarked singular, suggesting that they share the same structure in the thematic domain.

- (73) a. *oosn-a-it* → *òosnêet*
 forest-TH-SEC
 ‘forest (SG)’
- b. *saa-a-it* → *sáaêet*
 buffalo-TH-SEC
 ‘buffalo (SG)’

Nonetheless, their plural forms in (74) show that they do take different plural allomorphs, so whatever variation there is cannot be due to differences in the thematic domain.²

- (74) a. *oosn-oos-ya-ik* → *òosnòosyék*
 forest-PL-TH-SEC
 ‘forests (PL)’
- b. *saa-iin-ik* → *sàaèeník*
 buffalo-PL-SEC
 ‘buffalo (PL)’

In summary, a gapping analysis does not appear to offer a clear account of number allomorphy in Kipsigis. When it comes to singulative suffixes, it does not offer a clear way of stating that HUMAN is necessary but not sufficient for the occurrence of singulative *-iin*. When it comes to the plural suffix, it is forced to account for the allomorphy in terms of features, and it has to push these features above the number structure. Insofar as it would be forced to postulate features for the sole purpose of accounting for allomorphy, it would appear to be subject to the initial conceptual criticism: It can only account for morphological issues by making otherwise unnecessary claims about syntactic heads.

In contrast, the analysis I proposed does not require particular features, it merely requires that there be some structure associated with nouns that is lower than number and that can be spelled out by root VIs. Under such an analysis, the root VIs enforce particular configurations that give rise to particular number allomorphs, and the morphological classes were true interface properties.

² There is, of course, the possibility that there is a domain in between the thematic domain and the number structure that can vary independently of either, and that it’s this domain that is different between the two nouns. However, we have seen above that the particular item that spells out the number structure determines the form of the thematic allomorph. It would seem to me that, besides being otherwise unmotivated, such an intermediate domain would possibly undermine the general account of the fact that a number allomorph determines the thematic allomorph, since there is now an independently varying domain in between those two regions.

References

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