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Nominal prefix drop in Aghem: Agree and strictly local Impoverishment

1. Background and goal: Impoverishment has been proposed in Distributed Morphology (DM) to account for complex morphological patterns such as syncretism. As noted in Božič (2020), while a lot has been said about the rule itself and the featural restrictions on its application, less is known about the locality constraints that underly this operation. He offered to cover this gap by proposing the locality restriction in (1) to account for syncretic patterns in the number contrasts of Ljubljana Slovenian.

(1)   *Strictly Local Impoverishment*
          Triggering context may be conditioned in (a) the X^0 targeted for Impoverishment, or (b) the closest X^0 that the target of Impoverishment c-commands.   (Božič 2020:405)

By proposing (1), he argued for a locality, in addition to featural, restriction on the application of Impoverishment, such that the rule is less arbitrary than is generally thought. I further demonstrate that a locality restriction on the rule is required, but (1) fails to account for the phenomenon of nominal prefix drop in Aghem. I argue for a revised version of (1) that derives the Ljubljana Slovenian and the Aghem facts.

2. Data: Aghem (Grassfields Bantu, Cameroon) parallels most Bantu languages in that nouns in isolation must take class markers. The examples in (2) illustrate this with the root *bə̀ŋsɔ́* 'car'.

(2)   a.   *(kə̀)-bə̀ŋsɔ́   b.   *(ò)-bə̀ŋsɔ́
             7-car   8-car
             'car'   'cars'

When the nouns in (2) are followed by agreeing modifiers other than numerals, the nominal prefix must be dropped. I show this in (3) with a possessive pronoun, and in (4) with demonstratives. The modifiers have class prefixes, indicative of agreement with the head noun.

(3)   a.   (*kə̀)-bə̀ŋsɔ́ k-áŋâ   b.   (*ò)-bə̀ŋsɔ́ w-áŋâ
             7-car   7-POSS.1SG   8-car   8-POSS.1SG
             'my car'   'my cars'

(4)   a.   (*kə̀)-bə̀ŋsɔ́ k-ɔ́n   b.   (*ò)-bə̀ŋsɔ́ w-ɔ́n
             7-car   7-DEM   8-car   8-DEM
             'this car'   'these cars'

If *bə̀ŋsɔ́* 'car' is modified by only a numeral, it must keep its nominal prefix. The examples in (5) illustrate this. The numerals in (5) also agree in noun class with the head noun.

(5)   a.   *(kə̀)-bə̀ŋsɔ́ kə́-mɔ̀ʔ   b.   *(ò)-bə̀ŋsɔ́ ó-twὲ
             7-car   7-one   8-car   8-five
             'one car'   'five cars'

When a possessive pronoun, for example, combines with a numeral to modify the same noun, the numeral appears last, and the nominal prefix is dropped. The examples in (6) demonstrate this.

(6)   a.   (*kə̀)-bə̀ŋsɔ́ k-áŋâ   kə́-mɔ̀ʔ   b.   (*ò)-bə̀ŋsɔ́ w-áŋâ   ó-twὲ
             7-car   7-POSS.1SG 7-one   8-car   8-POSS.1SG 8-five
   'one big car'   'five big cars'

This is a rather interesting pattern that, to my knowledge, has not been given much theoretical attention before (see Hyman 1979, 2010 for descriptions of the phenomenon). We know from, for example, Brazilian Portuguese (7) that word order changes may affect morphological exponence, but crucially, on the trigger of agreement (Pereira, 2017). Agreeing *outro* 'other' in (7) can surface without (7-a) or with (7-b) the plural agreement marker $\boxed{s}$ depending on its position vis-à-vis the head noun. For the Aghem case, it is the target of agreement that is affected, and there is clear evidence that agreement was carried out (c.f., the agreement exponents on the modifiers).

(7) a. Os   dois outro ø carro branco
         the.PL two other.ø car.ø white.ø
         'The other two white cars.'

     b. Os   outro s dois carro branco
         the.PL other.PL two car.ø white.ø
         'The other two white cars.'   (Pereira 2017:86)

3. On DP syntax and concord in Aghem: The basic word order internal to Aghem DPs is N > POSS > ADJ > ENC/DEM > NUMERAL (Hyman, 1979, 2010). This is illustrated in (8). I propose the more or less standard DP structure in (9), and derive this order by moving nP to SpecDP (10). Adjectives and possessive pronouns are adjoined (following Abels & Neeleman 2012, but not Cinque 2005) to the right of nP. Hyman (1979) argues that demonstrative pronouns are D heads and are in complementary distribution with the enclitic-like determiner that always follows adjectives, except in the presence of a demonstrative pronoun (c.f., (8)).

(8) (*kɔ̀)-bɔ̀ŋsɔ́ k-áŋâ kè-ně (*kɔ́) kɔ́-tʃí kɔ́-mɔ̀ʔ
     7-car   7-POSS 7-big 7-ENC 7-DEM 7-one
     Lit. 'That my one big car'
     'That one big car of mine'

(9) Base structure

(10) After movement
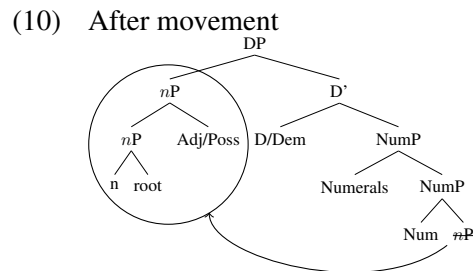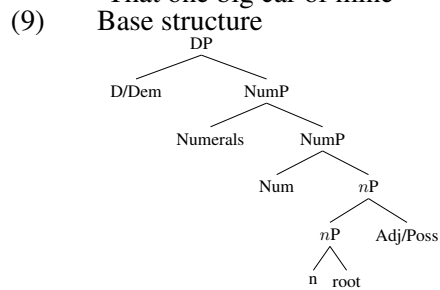
I assume, for agreement, that (a) gender features are on the nominalizing head n (Kramer 2015, i.a.,) and (b) number features are on Num (Ritter, 1991). They get together to spell out nominal prefixes on n via Agree. Concord is formalized via agreement, such that each agreeing modifier has a φ-probe. Agreement can be upward or downward (Baker 2008, i.a.,)

4. Deriving nominal prefix drop: It is important to first note that a purely syntactic account that would treat the absence of nominal prefixes as representative of Agree failures is out of reach because the features that get deleted are inherent to nouns, hence interpretable from the start. I therefore propose the rule in (11), such that an n head with inherent φ-features is deleted in the presence of an X head with non-inherent features (from Agree) of the same type. The Aghem facts, under this view, instantiate a form of haplology dissimilation that is sensitive to morphological features (see Nevins 2012, for an overview).

(11) *Obliteration*
      n node with F$_{\text{INHERENT}}$ → ø/ X node with F'$_{\text{NON-INHERENT}}$

Unless the rule in (11) is further restricted, it predicts that the nominal prefix will be dropped with all possible agreeing modifiers, numerals included. Looking at the tree in (10), we see that all agreeing modifiers, except the numeral, c-command n. I propose that the rule only applies if the triggers (the agreeing modifiers) c-command the target (n). The result is that nominal prefixes will never drop in the presence of only a numeral.

5. Implications: The locality restriction that derives the Aghem facts does not follow from the one that Božič (2020) proposes to account for Ljubljana Slovenian. For a it to do so, it has to be revised as in (12), such that Impoverishment only applies when the relevant features are on the same head (the target), or the target immediately c-commands or is immediately c-commanded by the trigger.

(12) *Strictly Local Impoverishment* (Revised version)
      Triggering context may be conditioned in (a) the X^0 targeted for Impoverishment, or (b) the closest X^0 that the target **or the trigger** of Impoverishment c-commands.

6. Summary: I provided data from the Grassfields Bantu language Aghem to show that Impoverishment must be locally restricted. I then showed that the locality restriction proposed by (Božič, 2020) does not derive the Aghem facts. I proposed a revised version of the rule that accounts for Ljubljana Slovenian as well as Aghem.