

Eligibility at PF: ellipsis and concord in Moksha

Mariia Privizentseva

1. Introduction

In some languages modifiers generally do not show concord with the noun but are inflected if the noun is elided. This phenomenon is schematically presented in (1).

- (1) a. [adjective noun-**infl**] / * [adjective-**infl** noun-**infl**]
b. [adjective-**infl** noun-**infl**-] / * [adjective noun-**infl**-]

This type of nominal ellipsis is attested in a number of languages (see, e.g., Hungarian (Kester, 1996a; Saab & Lipták, 2016), Ossetic (Hettich, 2002), and Turkish (Bošković & Şener, 2014) among others). In this paper I will present new data on nominal ellipsis in Moksha Mordvin and show that they cannot be derived by existing approaches to emergence of inflection under ellipsis (see Kester (1996a,b), Bošković & Şener (2014), Ruda (2016), Saab & Lipták (2016), Murphy (2018), and Saab (2019)). On the basis of the distribution of inflectional exponents, I will argue that inflection in elliptical contexts is an instance of nominal concord. I will further suggest that concord is a regular property of Moksha nominal syntax, i.e., valued concord probes are present on nominal modifiers in non-elliptical contexts as well, but they remain without phonological realization. In order to derive absence of inflection in non-elliptical contexts, I would like to propose that (i) Spell-Out applies locally; (ii) Probe features are by default ineligible at PF and need to undergo Probe Conversion in order to get accessible to PF processes. Concord exponents are not realized in non-elliptical contexts because Probe Conversion counterfeeds Spell-Out, and they receive realization under ellipsis because Spell-Out of a nominal modifier is postponed then.

I will introduce the data, provide arguments for the concord analysis, and show the drawbacks of existing approaches in section 2, present the analysis and show how it captures the data in section 3, discuss implications of the analysis in section 4.

2. Inflection under ellipsis

2.1. Main pattern

Moksha belongs to the Mordvin group of Finno-Ugric languages. It is spoken in the Republic of Mordovia, Russia. If not indicated otherwise, the data come from elicitation with native speakers that I conducted during fieldwork trips to villages Lesnoje Tsibajevo and Lesnoje Ardashevo (Temnikovskiy District) in 2015-2019. The basic word order in Moksha is varying between SOV and SOV, and genitive marks direct objects.

Nouns in Moksha are inflected for case, number, and definiteness. Inflection is fusional, and there are restrictions on features that can be expressed together (e.g., definiteness can be marked only in structural cases). As shown in (2), inflection appears on the noun in a regular case.

- (2) ravžə pinʲə-tʲnʲə-nʲdʲi / *ravžə-tʲnʲə-nʲdʲi pinʲə-tʲnʲə-nʲdʲi / *ravžə-tʲnʲə-nʲdʲi pinʲə
black dog-DEF.PL-DAT black-DEF.PL-DAT dog-DEF.PL-DAT black-DEF.PL-DAT dog
'to the black dogs'

* Mariia Privizentseva, Leipzig University, mprivizentseva@uni-leipzig.de. I am very grateful to Moksha native speakers for sharing their language with me. Thanks to Maria Kholodilova and Svetlana Toldova for comments on the data, to Gereon Müller for discussions.

If a noun is elided as in (3), its modifier is inflected for features of the elided noun.

- (3) Mon maks-ən^j [akšə-t^jn^jə-n^jdⁱ ___]
 I give-PST.1SG white-DEF.PL-DAT
 ‘{Context: To which cats did you give food?} I gave to a white ones.’

If an elided noun has multiple remaining modifiers as in (4), inflection appears only on the modifier that is linearly closest to the ellipsis site.

- (4) Mon and-in^jə [mazi(*-t^j) akšə-t^j ___]
 I feed-PST.3.O.1SG.S nice(*-DEF.SG.GEN) white-DEF.SG.GEN
 ‘{Which cat did you feed?} I fed the beautiful white one.’

2.2. Branching modifiers

Ellipsis with branching modifiers presents one piece of evidence in favor of the idea that inflection results from agreement within a noun phrase. Agreement exponents are often realized directly on a syntactic object that undergoes agreement. This is also the case with inflection under ellipsis: Inflection appears on the head of a modifier even if it is not the linearly closest element to the ellipsis site. Example (5) shows that in Moksha an argument of a participle can either precede the participle or follow it.

- (5) Mon rama-jn^jə [[keluv-ən^j lopa-stə ti-f] / [ti-f keluv-ən^j
 I buy-PST.3.O.1SG.S birch-GEN leaf-EL make-PTCP.RES make-PTCP.RES birch-GEN
 lopa-stə] nastojka-t^j]
 leaf-EL liquor-DEF.SG.GEN
 ‘I bought the liquor made from birch leaves.’

Independently of the order between a participle and its argument, morphological exponents always appear on the participle. In (6-a), the participle is linearly closer to the ellipsis site and is inflected for features of the elided noun. In (6-b), the participle is inflected as well, but here its argument is closer to the ellipsis site. Example (6-c) shows ungrammaticality of exponents on the argument of the participle.

- (6) Mon rama-jn^jə
 I buy-PST.3.O.1SG.S
 a. [keluv-ən^j lopa-stə ti-f-t^j ___].
 birch-GEN leaf-EL make-PTCP.RES-DEF.SG.GEN
 b. [ti-f-t^j keluv-ən^j lopa-stə ___].
 make-PTCP.RES-DEF.SG.GEN birch-GEN leaf-EL
 c. *[ti-f keluv-ən^j lopa-stə-t^j ___].
 make-PTCP.RES birch-GEN leaf-EL-DEF.SG.GEN
 ‘{Context: Which liquor did you buy?} I bought the [liquor] made from birch leaves.’

Note that inflection of an elided noun can appear on the relative form if it modifies the noun directly:

- (7) Mon rama-jn^jə [keluv-ən^j lopa-stə-t^j ___].
 I buy-PST.3.O.1SG.S birch-GEN leaf-EL-DEF.SG.GEN
 ‘{Context: Which liquor did you buy?} I bought the one from birch leaves.’

This data is highly problematic for the cliticization approach to inflection in elliptical contexts (see Dékány (2015), Ruda (2016), Saab & Lipták (2016), Murphy (2018), and Saab (2019)). Under this approach, exponents that surface on a remnant in elliptical contexts would appear on a noun in a regular case but cannot do so here because the noun is elided. Being left without the usual host, inflection cliticizes to the linearly closest element, which happens to be a nominal modifier. This approach wrongly predicts that inflection will appear on the argument of the participle in examples like (6-b) because it is linearly adjacent to ellipsis site.

2.3. Non-agreeing modifiers

Another argument for the concord-based analysis of inflecting ellipsis comes from restrictions on inflection. In Moksha, there are two types of nominal modifiers: Modifiers of the first type show inflection under ellipsis, while modifiers of the second type do not. The first type can be exemplified by adjectives, numerals, participles, or modifiers marked for the elative or the indefinite genitive¹; see Privizentseva (2020) for a complete list. Inflection on adjectives, participles, and modifiers marked for the elative was already shown in examples above; see (3), (6), and (7) correspondingly. Example (8) illustrates inflection on a remnant marked for the indefinite genitive.

- (8) Min^j rama-s^{ik} [pona-n^jn^jə-t^j ____].
 we buy-PST.3.O.3PL.S wool-GEN-DEF.SG.GEN
 ‘{Context: Which hat did you buy?} We bought the woolen hat.’

Definite genitive and lative are among modifiers that do not show inflection (again, see Privizentseva (2020) for further data). These modifiers can still license inflection. In (9), the elided noun is in the subject position, and as indicated by the plural marker on the verb, the noun bears the plural feature, but plural inflection is ungrammatical on the stranded modifier marked for the definite genitive.

- (9) [T^jε ava-t^j (/ *ava-t^j-ət / *ava-t^j-ənzə)
 this woman-DEF.SG.GEN woman-DEF.SG.GEN-PL woman-DEF.SG.GEN-3SG.POSS.PL
 ____] ašč-j^j-t^j morkš-t^j lank-sə
 be-NPST.3-PL table-DEF.SG.GEN on-IN
 ‘{Context: Whose books are on the shelf? I don’t know} This woman’s [books] are on the table’.

Similarly, in (10) the definite genitive is the inflection expected of the elided noun. This inflection cannot appear on the stranded modifier marked for the lative, but ellipsis is fully grammatical.

- (10) Son art-əz^jə [sportzal-u (/ *sportzal-u-t^j) ____] ravžə kraska-sə.
 she paint-PST.3SG.O.3SG.S gym-LAT gym-LAT-DEF.SG.GEN black paint-IN
 ‘{Context: Which door did she paint black?} She painted [the door] to the gym black.’

These data are relevant for two reasons. First, they show that inflection on a remnant plays no role in licensing ellipsis. This argues against approaches that derive inflection from the necessity to license and identify *pro* (see Kester (1996a,b), and also Lobeck (1995)). The data are also challenging for the cliticization analysis (see Saab & Lipták (2016) and references above) because nominal inflection should be stranded independently of the type of the modifier so that this approach overgenerates. Second, the data raise a question about principles underlying this split between inflecting and non-inflecting modifiers. As shown by Baker (2008), in languages with regularly overt concord, modifiers that have their own ϕ -features do not agree with a head noun because inherent ϕ -features intervene and block agreement. I argue that the same principle underlies the presence and absence of inflection under ellipsis.

- (11) Generalization: A modifier is inflected under ellipsis unless it has its own ϕ -features.

Adjectives or numerals do not have their own ϕ -features, and they get inflected. Definite genitive and lative are nouns with their own features, and they cannot show inflection. A potential complication comes from the indefinite genitive and the elative forms. I suggest that they lack ϕ -features and are attributivizers homonymic to the corresponding cases.² For indefinite genitive, this is supported by (12)-(13), where the indefinite genitive attaches to an adverb and turns it into nominal modifiers:

- (12) Son sa-s^j is^jak.
 she come-PST.3[SG] yesterday
 ‘She came yesterday.’
- (13) [is^jak-ən^j kši-t^j]
 yesterday-GEN bread-DEF.SG.GEN
 ‘(to buy) yesterday’s bread’

¹ The genitive marker in the presence of the noun is -(ə)n^j, but it is -(ə)n^jn^jə- before inflection of the elided noun. The geminated allomorph is used when a genitive exponent is not word-final.

² The peculiarity of these forms are reflected in Moksha grammars, e.g., indefinite genitive is not listed among cases in some descriptions of Moksha grammar; see, e.g., Koljadenkov & Zavodova (1962:189-192).

As for the relative, it has somewhat different properties in the adnominal position. Elative case can be used to mark cloth, but such a use is ungrammatical in other contexts, cf. (14) and (15).

- (14) Sʲinʲ senʲəm panar-stə sʲtʲərʲ-nʲɛ-tʲnʲə. (15) *Katʲɛ sa-sʲ senʲəm panar-stə.
 they blue dress-EL girl-DIM-DEF.PL Katja come-PST.3[SG] blue dress-EL
 ‘They are the girls in blue dresses.’ ‘Katja come in the blue dress.’

Another argument comes from inflection in non-verbal predication. As shown by Baker (2008), agreement in the predicative position is another property that follows from the presence or absence of ϕ -features. In Moksha, adjectives as well as forms marked for the indefinite genitive and elative show number agreement in the predicative position:

- (16) Sʲinʲ jomla-t. (17) Kud-tʲnʲə šuftə-nʲnʲə-t.
 they small-PL house-DEF.PL wood-GEN-PL
 ‘They are small.’ ‘The houses are wooden.’
- (18) Nastojka-tʲnʲə keluv-ənʲ lopa-stə-t.
 liquor-DEF.PL birch-GEN leaf-EL-PL
 ‘Liquors are from birch leaves.’

In contrast, definite genitive and elative do not show number inflection; see (19) and (20).

- (19) Kolʲəndʲəma-tʲnʲə tʲɛ sʲtʲərʲ-nʲɛ-tʲ / *sʲtʲərʲ-nʲɛ-tʲ-(ə)tʲ
 toy-DEF.PL this girl-DIM-DEF.SG.GEN girl-DIM-DEF.SG.GEN-PL
 ‘The toys are this girl’s.’
- (20) Tʲɛ ki-tʲnʲə virʲ-i / *virʲ-ij-tʲ.
 this road-DEF.PL forest-LAT forest-LAT-PL
 ‘These roads are to the forest.’

I conclude that the ability to take inflection under ellipsis is dependent on the presence of inherent ϕ -features.³ Thus, its distribution follows the same principle as the distribution of exponents in languages with regularly overt nominal concord.

2.4. Connectivity effects

It has been argued that despite non-pronunciation an ellipsis site contains a regular syntactic structure (see Merchant (2001), van Craenenbroeck & Merchant (2013), *i.a.*). This was also shown for nominal ellipsis (see, e.g., Corver & van Koppen (2009), Alexiadou & Gengel (2012), Saab & Lipták (2016), and Saab (2019)). In this section, I will present an evidence that the nominal ellipsis site in Moksha contains a full-fledged syntactic structure as well. First, an elided noun assigns an Agent Θ -role to its argument; see (21). Note that Pushkin is the writer, not the possessor of the novel here.

- (21) Kona az-ks-stə ton muj-itʲ ošibka-tʲ?
 which say-NZR-EL you find-PST.3.O.2SG.S mistake-DEF.SG.GEN?
 Mon muj-inʲə [Puškən-ənʲ od-stə ___].
 I find-PST.3.O.1SG.S Pushkin-GEN new-EL
 ‘In which novel did you find a mistake? I found in the new [novel] by Pushkin.’

Second, a modifier of the elided noun can be extracted as in non-elliptical contexts; see (22).

- (22) Kinʲ kolga Katʲa rama-zʲə [sʲɛ ocʲu-tʲ ___]?
 who.GEN about Katja buy-PST.3SG.O.3SG.S this big-DEF.SG.GEN
 ‘{Context: Katja bought books.} About whom Katja bought this big one?’

³ While the attributive relative differs from the elative used as an argument of a verb, the argument against cliticization in section 2.2 still stands. Cliticization is a late PF process so that ϕ -features should not influence it. Moreover, if we suppose that stranded affixes can jump over hosts with ϕ , inflection in (6-b) is then predicted to appear on a linearly next object without ϕ -features, which is the genitive modifier of the elative, not the participle.

Third, idiosyncratic markings of arguments are preserved under ellipsis; see (23). As shown by Kozlov (2018), a direct object of an atelic verb can be marked by the postposition *esə*. This marking is obtained by the corresponding nominalization, and it is also grammatical under ellipsis; see (23-b).

- (23) a. Son šuv-s^j tʲɛ lotk-tʲ esə i lotka-s^j.
 she dig-PST.3[SG] this hole-DEF.SG.GEN in.IN and stop-PST.3[SG]
 ‘She was digging this hole and then stopped’. (Kozlov, 2018:423)
- b. [Tʲɛ zadača-tʲ esə kuvaka-s^j ___] izʲ pomaga.
 this task-DEF.SG.GEN in.IN long-DEF.SG NEG.PST[3SG] help.CN
 ‘{Context: Did you read explanations?} The long [explanation] of this task didn’t help.’

I conclude that an elided noun is syntactically present. This provides an argument against an approach that postulates *pro* within the ellipsis site (see Kester (1996a,b)) and an approach under which a nominal modifier is substantivized (see Bošković & Şener (2014)) and therefore marked for nominal features: They both are incompatible with an elided noun being syntactically present.

2.5. Summary

In this section, I have presented the original data on nominal ellipsis in Moksha Mordvin. The pattern is as follows. Modifiers are inflected for nominal features in Moksha only if the noun is elided. Inflection appears on the linearly last of multiple modifiers. If a stranded modifier is branching, the head of the modifier is inflected. Modifiers that have their own ϕ -features cannot be marked for features of an elided noun, thereby showing the same restriction on the distribution of agreement as in languages with regularly overt concord. An elided noun shows connectivity to the rest of the noun phrase, which implies that the elided noun is present in syntax. I have also shown that three existing approaches to inflection under ellipsis (i.e., null *pro*, substantiation, and cliticization) cannot derive the full range of the data.

3. Proposal

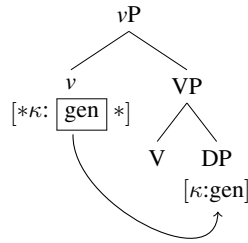
Existing approaches to inflection under ellipsis share the idea that a nominal modifier receives inflection because the noun is absent so that inflection is required to satisfy some constraint. Here I would like to pursue a different type of analysis. I suggest that inflection under ellipsis is an instance of concord and that Moksha is in fact a concord language. The features are syntactically present on a modifier in non-elliptical contexts as well, but they are inaccessible for the PF component. Ellipsis thus reveals a general but otherwise indiscernible property of Moksha nominal syntax. In this section, I will first lay out my assumptions about nominal concord and ellipsis and then present an analysis that derives the distribution of overt exponents.

3.1. Concord

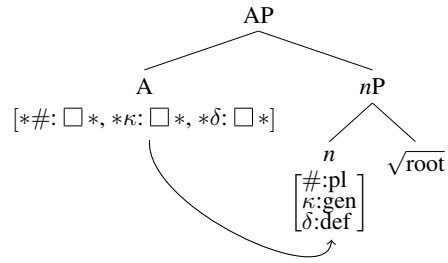
Case is standardly assumed to be assigned to a noun by a higher head, but by then DP is a proper subpart of the structure so that any operation that delivers case concord violates the Strict Cycle Condition (see Chomsky (1995, 2019)). One possible solution is to abandon cyclicity, as suggested by Norris (2014) and Bayırlı (2017). Another option is to redefine Agree as Feature Sharing; see Frampton & Gutmann (2000) for the concept and Kramer (2009), Danon (2011) for such an analysis of concord. Here I take nominal concord to be derived by regular Agree (see Carstens (2001, 2018), Baker (2008), Toosarvandani & van Urk (2014), Landau (2016), Ingason & Sigurðsson (2017), Puškar (2018)) and suggest that case, like other nominal features, originates within the noun phrase and is checked by a higher head (T, *v*, or P). This is shown in (24), where a DP in the direct object position has a genitive feature (recall that genitive is a regular case for direct objects in Moksha), and a *v* head has an unchecked probe for the genitive case.

The derivation in (25) illustrates nominal concord in Moksha. Number, case, and definiteness originate in the *n* head; see Hankamer & Mikkelsen (2005), Heck et al. (2009) for the low origin of definiteness. Modifiers have unvalued probes for the corresponding features. Since probes always target features on a same node (i.e., on *n*), I assume that they all probe together. Finally, I assume the AP/(PartP/NumeralP etc.)-over-NP structure; see Abney (1987), Bošković (2005), and Murphy (2018).

(24) Case checking



(25) Nominal concord⁴



3.2. Ellipsis

Ellipsis is represented in syntax by the [E]-feature, and [E]-features responsible for different types of ellipsis have somewhat different feature specifications; see Merchant (2001, 2005) and Aelbrecht (2011). In particular, [E] triggering nominal ellipsis has an unchecked nominal feature ($[E_{[*CAT: \overline{N}]}]$) that ensures the local presence of a noun.

3.3. Realization

In Moksha, nominal concord is not phonologically realized on a modifier if a noun is present. The account of this has two ingredients.

The first one is local Spell-Out. While it is widely assumed that the syntactic structure is spelled out in steps (see Chomsky (2000, 2001)), the question about what constitutes the Spell-Out domain remains open, cf. various approaches in Epstein & Seely (2002), Marantz (2007), Starke (2009). Here I would like to suggest that Spell-Out applies to a node as soon as it has no unsatisfied features left, where features that trigger Merge ($[•F•]$) and Agree ($[*F: □ *]$) count as unsatisfied. These features are satisfied after the operations they bring about apply. Spell-Out does not create syntactically inaccessible domains; see Dobler et al. (2011), Martinović (2019), and also Chomsky (2008:143). As for opacity in syntax, there are various ways it can be modeled without appealing to Spell-Out; see Rackowski & Richards (2005), Müller (2011), and Keine (2019) for some options.

(26) Spell-Out: Spell-Out applies to a node that has no unsatisfied features.

The second ingredient is Probe Conversion. Probes are valued or checked by Agree, but after Agree they still have properties that distinguish them from originally valued features and make them ineligible at the interfaces; see Epstein et al. (2010, 2012). I will indicate this by preserving asterisk diacritics after Agree ($[*F: α *]$). In order to get accessible to the PF interface, probe features need to undergo Probe Conversion; see (27). It removes properties that prevent interpretation of a probe at PF. Since PF is traditionally depicted as the left branch on the Y-model, I will mnemonically notate this by the removal of an asterisk to the left of a feature ($[F: α *]$).

(27) Probe Conversion: Probe Conversion applies to valued or checked probes and deletes the diacritics that mark probe features as ineligible at PF.

The notion of Probe Conversion rests on the assumption that probes do not get identical to originally valued features by a mere fact of valuation. I would like to show that this assumption is indispensable in the current minimalist syntax. The discussion goes back to Full Interpretation proposed by Chomsky (1986). According to it, each element present at an interface must have an interpretation there. Applied to LF, this means that features not contributing to the semantic interpretation must be stripped away before a syntactic object is passed to the interface. This task is challenging because interpretability of a feature at the interface is per se not available in syntax. There are two solutions to this problem.

⁴ Following the notation in Heck & Müller (2007), I indicate features triggering Agree as $[*F: □ *]$ and features triggering Merge as $[•F•]$.

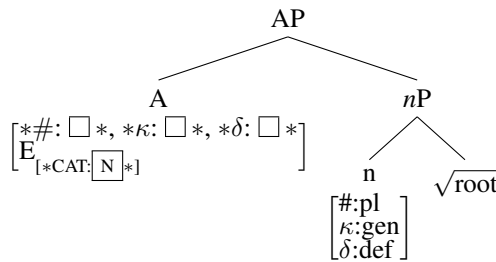
The first one comes from Chomsky (1995). He suggests that features uninterpretable at LF correspond to unvalued features in syntax and that a feature must be deleted upon valuation because it will lose its difference later. This deletion is however not the same operation as erasure because after valuation features are still accessible in syntax and morphology. It is in fact a diacritic that indicates uninterpretable features. The second solution was suggested in later Chomsky's works; see Chomsky (2004, 2008). In this model, a phase head (C or ν^*) brings all uninterpretable features that are then inherited by a lower head (T or V). Valuation of uninterpretable features and Transfer of a complement of a phase head apply simultaneously so that no additional diacritic is needed. As observed by Richards (2007), the system predicts that there cannot be any agreement features on a phase head or in its specifier because they are transferred with the next higher phase. Thus, it cannot derive correct deletion of uninterpretable features in a rather sizable amount of cases; see Epstein et al. (2010, 2012), Obata & Epstein (2011). This includes such phenomena as complementizer agreement, object agreement on a ν , reflexes of a successive-cyclic movement, T-to-C, and agreement in D heads (if DPs are phases as well).

While the discussion on interpretability was mainly limited to the LF interface, here I address the question about features uninterpretable at PF. It appears that Merge features are generally not subject to morphological realization and that Agree features are postulated in syntax more frequently than they are actually realized, cf. an assumption that case assignment is a by-product of ϕ -agreement (Chomsky, 2000:127; Chomsky, 2001:6) that forces all languages to have object agreement. I hypothesize that non-realization of Merge features and restricted realization of probe features are due to uninterpretability of the operation inducing features at PF. If there is a phonological realization of a probe feature, it means that it underwent Probe Conversion before Spell-Out.

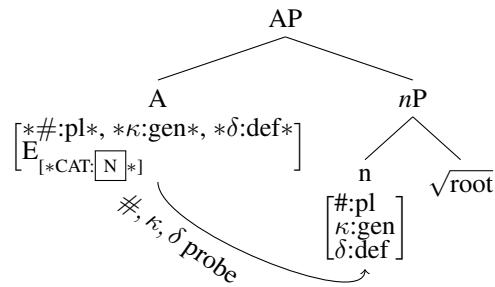
3.4. Analysis

Let us start with the scenario when a noun is elided, and concord is realized. The nominal modifier has concord probes and [E] with an unchecked categorial sub-feature; see (28). As suggested earlier, all concord features probe and get valued simultaneously; see (29). The valued concord probes undergo Probe Conversion in the next step; see (30). The derivation can then move on to the next unsatisfied feature, an ellipsis feature in this case. It checks its categorial sub-feature in step (31) and after this the adjective is spelled out because at this point all its features are satisfied; see (32). In this derivation, concord probes underwent Probe Conversion before Spell-Out and therefore receive realization.

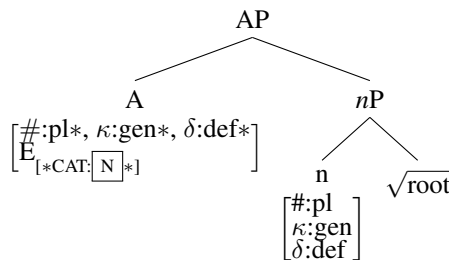
(28) Step I



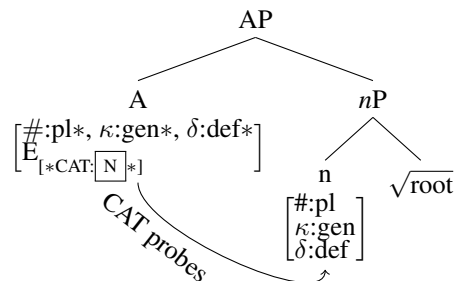
(29) Step II: Agree and valuation



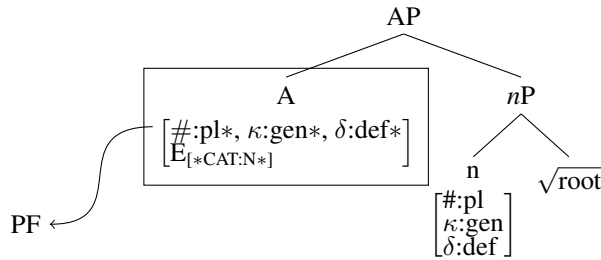
(30) Step III: Probe Conversion



(31) Step IV: [E]-feature

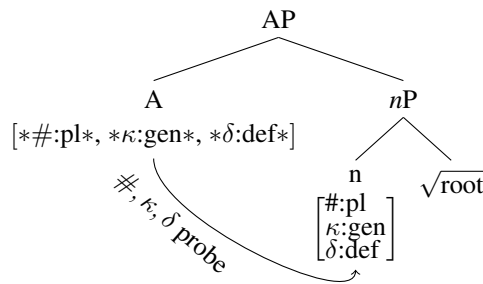


(32) Step V: Spell-Out

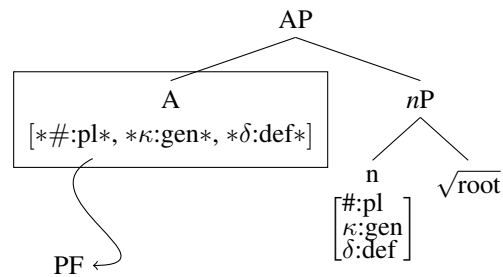


If the noun is not elided, concord probes are the only features on a modifier. After their valuation there are no more unsatisfied features on the modifier (see (33)) so that it immediately undergoes Spell-Out as in (34). Probe Conversion applies in the next step, but it counterfeeds Spell-Out. Concord probes are not yet converted at the point of Spell-Out, which means that they are inaccessible at PF. This generates absence of concord exponents in non-elliptical contexts in Moksha.

(33) Step I: Agree and valuation



(34) Step II: Spell-Out



To sum up, concord features are present but do not receive phonological realization because Spell-Out applies before probes are converted and get accessible to PF. Exponents are realized under ellipsis because concord probes are followed by another unsatisfied feature, which prevents Spell-Out from applying immediately after Agree and valuation of concord features, allowing them to be converted first.

This approach also easily derives other properties of inflection under ellipsis. First, inflection is only on the linearly last of multiple modifiers because only one [E]-feature is required to license ellipsis, and it occurs on the node that is closest to the ellipsis site. Second, inflection is on the head of a branching modifier because it is the head of the modifier that takes the concord probes.⁵ Third, modifiers that have their own ϕ -features do not bear concord inflection under ellipsis. Baker (2008) shows that this restriction is due to intervention: Concord probes will always encounter features on a modifier first. The same logic is applicable in my analysis. Independently of the position of probes within the modifying DP, they will first encounter features from within this DP.⁶

4. Discussion

On the basis of the original data from Moksha Mordvin, I have proposed the new analysis of inflection under ellipsis. According to it, concord is viewed as a regular property of Moksha syntax, and ellipsis makes it appear phonologically. This means that there are two types of concord languages:

⁵ Complex modifiers were argued to be challenging for the modifier-over-noun structure (see an overview by Roehrs (2018)). Here I assume that a modifier first combines with its argument and then takes noun as its second argument. Agreement then either applies under m-command or probes project to the intermediate projection level; see, e.g. Béjar & Rezac (2009) and Carstens (2016) on probe projection.

⁶ Examples throughout this paper show that Moksha has overt predicative agreement. I suggest that in the predicative domain case and ϕ -features do not probe together (see Privizentseva (2020) for empirical evidence). Case checking applies after ϕ -agreement thereby allowing ϕ -features to undergo Probe Conversion before Spell-Out.

Exponents are always present in languages like Estonian, Spanish, or Russian, while they are realized only under ellipsis in languages like Moksha (and potentially in other languages with this ellipsis type). I suggest that the order of some operations can be fixed language-specifically (see Georgi (2017), Assmann et al. (2015), and Murphy & Puškar (2018)) and that in languages with invariable realization of concord Probe Conversion always applies before Spell-Out (see Privizentseva (2020) for further details).

If the proposed analysis is on the right track, it has the following implications for the syntactic theory: (i) Spell-Out applies very locally; (ii) Valuation in syntax does not imply phonological realization; (iii) Agree derives concord.

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