**Syntactic head movement and PF spellout collide: Nominal predicates in West Circassian**

**Introduction.** Noun incorporation in polysynthetic languages has been analyzed as either head movement (Baker 1988, 2009) or the result of postsyntactic spellout rules, where a phrasal constituent is pronounced as part of a larger word (Compton & Pittman 2010; Barrie & Mathieu 2016; Ershova 2020). Based on evidence from West Circassian (or Adyghe; Northwest Caucasian), I argue that both approaches are correct. Depending on the syntactic context, the concatenation of multiple lexical roots in West Circassian is derived in two distinct ways: (i) the mapping of complex syntactic material to one phonological word and (ii) syntactic phrase-to-head movement.

**Noun incorporation in nominal phrases.** West Circassian nominal phrases are constructed by compounding the nominal root with its complements or modifiers. There may be several modifiers, and they may be modified themselves, include functional morphology such as a nominalizer (1) or complex phrasal material such as conjunctions (2). The resulting morphological string passes phonological wordhood diagnostics and displays properties of a single word, with derivational and inflectional morphology framing the incorporated lexical modifiers (Lander 2017; Ershova 2020).

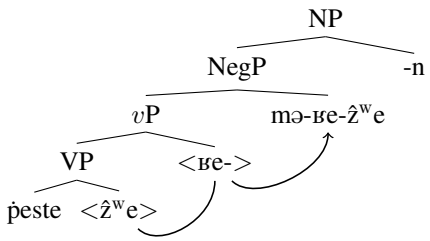
(1) tjə- [ [še -n]- xebze -daxe ] -xe -r
1PL.POSS- [lead -NML]- rule -beautiful -PL -ABS
'our lovely rules of conduct (lit. of leading)' (Ershova 2020:431)

(2) [ č̣'ele -[dexe -əč̣'jə -ʔʷəšə] ] -r
boy -beautiful -and -smart -ABS
'the beautiful and smart boy'

Based on the unrestricted nature of nominal phrase compounding, which includes a wide range of complements and adjuncts, a mix of lexical roots and functional morphemes, and allows for complex phrasal material in the incorporated modifiers, Ershova (2020) argues that nominal phrases do not involve syntactic noun incorporation, but are pronounced as a single phonological word due to rules of syntax to prosody mapping. Nominal affixes such as the possessive prefix, plural suffix and case suffix in (1) are likewise concatenated with the full noun phrase postsyntactically, with no syntactic movement involved.

**Head movement in verb phrases.** Unlike nouns, West Circassian verbs do not allow for productive compounding or noun incorporation. Ershova (2020) argues that this is by virtue of verbal forms being constructed via head movement and the verbal extended projection being mapped to a phonological phrase, rather than a phonological word, so that arguments and modifiers within that phrase are pronounced as separate words, rather than incorporated elements. The core evidence for this difference in word formation between verbal and nominal forms comes from affix ordering in nominalized verbal phrases, in which verbal affixal material intervenes between the verbal root and any incorporated arguments (3): the correct affix order is achieved via head movement of the verbal morphology, followed by the mapping of the full nominalized phrase to a single phonological word (4). Thus, nominal forms are mapped to phonological words from complex syntactic constituents, while verbal forms are constructed via head movement.

(3) wjə- ṗeste- mə$_v$- ʁe$_v$- ẑ$^{w}$e$_v$ -n
2SG.POSS- porridge- NEG- CAUS- boil -NML
'your not boiling of the porridge'

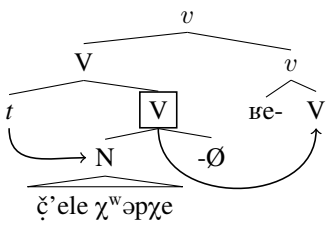
(4)



**Nominal predicates.** To form a nominal predicate, the corresponding noun phrase combines directly with verbal morphology. Just like a regular noun phrase, the nominal predicate may include complex modifiers, e.g. conjunctions (5), with the verbal affixes appearing on either edge of the resulting compound (5)-(6). Given that nouns and their modifiers form a complex phrasal constituent that is subsequently pronounced as a single phonological word, the forms in (5-6) present a puzzle: why do the verbal affixes, which generally form morphological strings as a result of head movement, attach to the edges of a full noun phrase, rather than triggering head movement of the nominal root and leaving the attached nominal modifiers in situ?

(5) sə$_v$- [$_{NP}$ č̣'ele -dexe -əč̣'jə -ʔʷəšə ] -ʁ$_v$
1SG.ABS- boy -beautiful -and -smart -PST
'I was a smart and beautiful boy'

(6) zə$_v$- b$_v$- ʁe$_v$- [$_{NP}$ č̣'ele -χʷəpχe ] -me$_v$
REFL.ABS- 2SG.ERG- CAUS- boy -diligent -COND
'if you are a good boy...' (http://adyghe.web-corpora.net/)

**Phrase-to-head movement.** Building on Carnie's (2000) analysis of Irish nonverbal predicates, nominal predicates are formed through the syntactic incorporation of the noun phrase, which includes the nominal root and any attached modifiers, into a null verbalizing projection. As Carnie (2000) extensively argues, the existence of this type of incorporation is predicted by Bare Phrase Structure (Chomsky 1994 *et seq*), where terminal and phrasal projections bear identical labels. The derivation is shown in (7): the noun phrase is constructed as usual and then selected for by a null verbalizing head. The verbalizer triggers movement and head adjunction of the full noun phrase, leaving the internal structure of the noun phrase intact. This type of phrasal head movement is made possible by the phrasal constituent bearing the same label as its head – in this case, N – and being structurally incomplete, i.e. lacking syntactic markers of a full NP such as the ability to bear case marking. This is in contrast with noun phrases in argument positions, which have the structural properties of a full XP and thus never undergo head movement. The resulting complex head then proceeds to combine with higher verbal morphology such as the causative prefix via subsequent head movement.

(7)



**Conclusion.** West Circassian noun incorporation is derived via (i) rules of syntax to prosody mapping, as in non-predicative noun phrases (1-2), or (ii) head movement of the incomplete noun phrase to a higher verbal head, as in nominal predicates (5-6). The intricate interaction between morpheme orders derived through head concatenation on the one hand and mapping at the PF interface on the other, as well as the possibility of phrase-to-head movement, pose a challenge for analyses where head movement is fully delegated to the postsyntax (Embick & Noyer 2001; Harizanov & Gribanova 2019 a.o.) and provides support for including head movement in the syntactic component (Baker 1988; Roberts 2010; Arregi & Pietraszko 2021 a.o.).