

## “The Syntax of Affix Orders and Mirror Violations in Wolof”

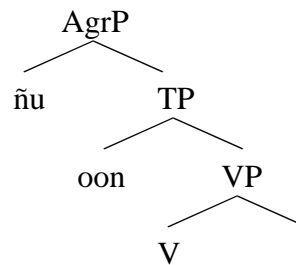
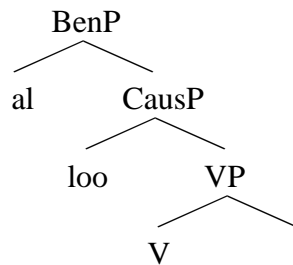
This talk presents an investigation of affix ordering in the inflectional and derivational morphology of Wolof, an Atlantic language of Senegal. Like other Atlantic languages, Wolof has a rich array of verbal affixes, making it a good candidate for a study of the interactions among affixes. In addition to the approximately 25 verbal affixes, Wolof is particularly interesting because of the variation in affix ordering in both the derivational and inflectional morphology. In (1), the verb carries only the inflectional *na*-suffix, which marks the clause as neutral focus. Following Pykkänen (2002) and others, we assume that benefactive, instrumental, and causative morphemes introduce arguments into the syntax. (2)a-b show that the causative (*-loo*) and benefactive (*-al*) only surface in one order: CAUS > BEN. Surprisingly, when another valence-changing affix such as the instrumental (*-e*) is present, the benefactive can precede the causative, as in (3)a. However, a comparison of (3)a and b reveals that the variation in possible affix orders relates to the interpretations of the postverbal DPs, even though the orders of the DPs has been kept constant. Thus, in (3)a, *Faatu* is the benefactee, while in (3)b *Faatu* is causee. One question that immediately arises from comparing (2) and (3) is how the presence of the instrumental affix in (3)a allows what is an otherwise ungrammatical affixal sequence, namely BEN > CAUS. From the perspective of the Mirror Principle (Baker 1985), (2)a-b could be accounted for by positing a hierarchy in which the benefactive head underlyingly c-commands the causative, as in (5)a.

Verbal head movement will generate the surface order V > CAUS > BEN. Such an ordering of heads will also correctly block (2)b, as it violates the Head Movement Constraint (Travis 1984). The surface order CAUS > (INSTR) > BEN in (3)a therefore represents a Mirror violation because it would require the verb to skip over the causative head in the derivation. This is extremely problematic for a head movement analysis.

Mirror violations are not restricted to the derivational morphology, but are also found in the inflectional morphology. Concentrating on the ordering of tense and the subject marker, (4)a-b show that in the affirmative, past tense (*-oon/woon*) must precede the subject marker (*-ñu*). The negative in (4)c-d, however, shows that the only permissible ordering is one in which the subject marker precedes the past tense morpheme. Note that in 4d, even if the tense morpheme were directly suffixed to the verb, it would still be ungrammatical. The ordering in (4)a indicates that tense is lower in the tree than the subject markers, as in (5)b. When the verb head-moves, it yields the surface order TENSE > AGR. Under a head movement analysis, this means that (4)c represents another instance of a Mirror violation in Wolof because the verb must skip T<sup>0</sup> to derive the correct surface order.

From examination of the possible affix orders, we conclude that Wolof verb morphology is not “templatic”, with literal ordered slots for morphemes. If this were so, the variation in morpheme ordering would go unaccounted for. In our talk, we show that the Mirror violations in Wolof are only apparent. We argue that the surface ordering of both derivational and inflectional morphemes falls out from a single syntactic hierarchy of heads and must involve large scale phrasal movement (i.e. pied piping). Overall, we argue for a view of Wolof (verb) morphology in which affix ordering follows from surface syntactic constituency, which is itself a result of ordinary syntactic processes in Wolof.

- (1) Faatu togg-na jën wi  
faatu cook-na fish the  
“Faatu cooked the fish”
- (2) a. Gàllaay bind-**loo-al**-na gan gi xale yi taalif  
gallaay write-cause-ben-na guest the child the poem  
“Gallaay made the children write the visitor a poem”  
b. \*Gàllaay bind-**al-loo**-na gan gi xale yi taalif  
gallaay write-ben-caus-na guest the child the poem
- (3) a. Gàllaay dóór-**al-e-loo**-na Faatu xale yi bant xeer  
gallaay hit-ben-instr-caus-na faatu child the stick stone  
“Gallaay made the children hit the stick with a stone for Faatu”  
b. Gàllaay dóór-**e-loo-l**-na Faatu xale yi bant xeer  
gallaay hit-instr-caus-ben-na faatu child the stick stone  
“Gallaay made Faatu hit the stick with a stone for the children”
- (4) a. Xale yi togg-**oon-na-ñu** jën wi b. \*Xale yi togg-**ñu-woon-na** jën wi  
child the cook-past-na-3pl fish the child the cook-3pl-past-na fish the  
“The children had cooked the fish”  
c. Xale yi togg-u-**ñu** **woon** jën wi d. \*Xale yi togg-u-**woon-ñu**  
child the cook-neg-3pl past fish the child the cook-neg-past-3pl  
“The children had not cooked the fish”
- (5) a. b.



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