# Head movement in disguise

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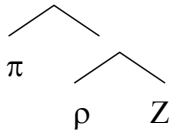
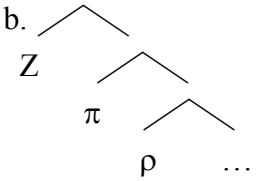
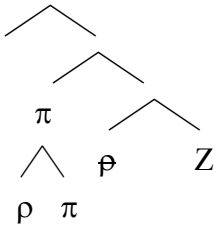
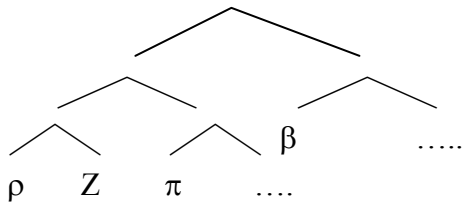
Since Chomsky's (1977) seminal paper *On Wh-movement*, it is common practice in generative syntax to resort to movement operations (move-α or its more recent version Internal Merge) to account for surface order variations and the semantic changes that they may bring about. Two types of movement are generally distinguished: phrasal movement and head movement. Assuming the phrase structure in (1a) where $\pi$ and $\rho$ are heads and Z a phrasal complement, movement of this complement to the specifier of $\pi$ yields (1b), while movement of $\rho$ to $\pi$ results in structure (1c).

(1) a. 


b. 


c. 


Recently, a third type of movement—snowballing—has been proposed that derives mirroring effects. In this case, movement proceeds in a roll-up fashion where the phrase containing the target is pied-piped to the preceding specifier and the newly formed sequence is pied-piped to the next higher specifier and so on. The representation in (1d) illustrates movement of $\rho$ to a higher probe $\beta$.

(1) d. 


In the literature, derivation (1b) is taken for granted: it is triggered by a formal feature, and is considered to always correlate with semantic effects—though some recent studies on discourse-driven word order alternations argue for prosody-driven movement with no systematic semantic effect uniquely attached to movement (e.g., Szendrői 2001). That movement targets a maximal category, but not just the matching feature is taken to result from generalized pied-piping: the extra features of the target that are required for PF convergence are moved automatically as 'free-riders'.

On the other hand, head movement (1c) appears to be controversial. Contrary to (1b), this movement is strictly local and counter-cyclic (i.e., it does not expand the structure). In addition, head movement is said to often lack 'noticeable' semantic effect and seems mainly driven by morpho-phonological requirements. These distinctive characteristics of (1c), as compared to (1b), led Chomsky (2001) to propose that head movement is part of the phonological component, rather than a syntactic operation.

The status of snowballing movement is not clear though it is needed to derive mirroring effects in an LCA theory of word order (Kayne 1994). Indeed, snowballing movement does not always lead to semantic manifestation. For instance, the order of modifiers in English (2a)

as opposed to their mirror image in Gungbe (2b) does not result in different scope readings in the two languages.

(2) a. These two big red cars
b. mótò vè$_{[red]}$ ɖàxó$_{[big]}$ àwè$_{[two]}$ éhè$_{[this]}$ lɛ́$_{[plural]}$

As is the case for head movement, therefore, snowballing movement does not create new c-command relations (Aboh 2004, Nevins 2010). Under the current minimalist typology of movement, snowballing movement displays similar properties to head movement and should therefore be part of the phonological component. Yet, the process involves generalised pied-piping of the sort observed in the phrasal movement (1b). In addition, snowballing movement typically exhibits semantic effects, when triggered by discourse particles. This latter property makes snowballing movement akin to head movement, which also shows semantic effects when determined by discourse properties such as focus and topic (Aboh and Dyakonova 2009).

This discussion shows that the movements in (1b-d) can all determine specific semantic effects even though they may take different forms. As such, there does not seem to be any principled way for deciding which belongs to the syntactic component and which does not. This paper revisits the standard typology of movement and shows that it is misleading. Within minimalism, movement is the consequence of a probe-goal relationship between bundles of features that are properties of heads. Under this view, whether the operation pied-pipes the head (minimally) or other features of the target that are required for PF convergence, is irrelevant to the computational system. The latter only calculates the relation between the probe and the goal (Aboh 2004, Donati 2006). This would mean that, aside the form of the moving category, there is no fundamental difference between the syntactic operations triggering the derivations in (1b-d). Accordingly, syntactic movement is by necessity head movement, sometimes in disguise. Under this unitary analysis of movement, the following questions arise:

1. Why is movement of a phrase necessarily cyclic and possibly long-distance?
2. Why is movement of a head apparently counter-cyclic and local?
3. What conditions generalized pied-piping?

This paper tries to answer these questions by looking at the morphosyntax of discourse particles in Gungbe.

**References**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