M-MERGER as relabeling: A new approach to head movement and noun-incorporation

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Proposal: Head movement = regular syntactic movement (of non-branching constituents) + *relabeling*.
Consequences: Explains why structurally-reduced nominals need processes like (pseudo-)incorporation in order to be licensed; moreover, we can model head-movement without intermingling morphology & syntax (cf. Matushansky 2006).

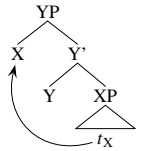
How head-movement works

Like Matushansky 2006, except M-MERGER is now just *relabeling*

Step 1: Movement of a (non-branching) X into the (first) specifier of YP.

Step 2: M-MERGER – change the label of X to a set, formed of: {Y, whatever-the-original-label-of-X-was}.

(1)



(2) **M-MERGER(X, Y):**
<label(X), X> →
<Merge(label(X), Y), X>

(label of Y / YP is unaffected)

NB: We are using the good old Chomsky 1995 notion of labeling, where a syntactic object is an ordered pair of <LABEL, CONTENTS>. And for good reason… *(ask us!)*

What to take from this:
This is like Matushansky 2006, except that:
- There is no longer an operation that takes two pieces of CONTENT that were not a constituent (X and Y, to the exclusion of the rest of XP) and turns them into something that then behaves like a syntactic constituent.
- There's something similar, but it's on the LABEL side, not the CONTENTS side.

Importantly, the evidence against this kind constituency violation arguably exists only on the CONTENTS side —
- e.g. the endless examples that can be constructed along the lines of (3):

(3) * It was [*into the*]$_i$ that I walked t_i store.

On the LABEL side, there might actually be evidence of something quite like (2). E.g.: selection of "DPs" behaves as if the label contained more than merely the features of the D head.

C-selection with complex labels

- To simplify things, let's assume that ***all*** labels are sets.
- In the simple case, an object's label will just be the singleton set formed from its head (e.g., a "VP" will be <{V}, {<{V}, V>, <{D}, … >}>)
- If c-selection operates over labels, we now need to reformulate it so that it can operate over the kind of sets formed by (2)

(4) If a lexical item L c-selects M then L can only merge with syntactic objects that have M as an *immediate term* of their label.

Constraints on labeling

(5) ***Capstone Condition*:** For every label α of a nonbranching node, either **(i)** α is a CAPSTONE LABEL; or **(ii)** at some point in the derivation, α is part of a complex label that contains a CAPSTONE LABEL.

At a minimum, T^0 and D^0 are CAPSTONE LABELS.
- Successive V-to-*v*-to-ASP-to-T head-movement satisfies (5).
- Successive N-to-*n*-to-NUM-to-D head-movement satisfies (5).

This recapitulates *conflation* (e.g. Hale & Keyser 2002, Harley 2004, 2013)
- PF has access to the complex labels formed in syntax.
- It can linearize those labels in *any* of the positions occupied by the terms.
  - similar to Brody's (2000) *Mirror Theory*
- The choice of position yields word order variation of the sort familiar from verb movement in English vs. French.

NB: Cyclic spell-out within a complex label can explain why certain elements, like NEG, affect word order possibilities.

(6) **Well-formedness condition on M-MERGER**
M-Merger (X,Y) is illicit if X is a CAPSTONE LABEL.
- This explains why there is generally no incorporation of the sort: $T_{embedded}$(-to-$C_{embedded}$)-to-V_{matrix}
  - cf. the "Proper Head Movement Generalization" (Li 1990, Baker 1996)

(P)NI objects are structurally reduced

(P)NI objects cannot host elements found in full DPs.

The extent of this reduction varies across languages (e.g. Baker 1996, 2014 Massam 2001; Heck & Richards 2010; Barrie & Mathieu 2016).

(6) **Mapudungun NI objects must be NPs**
a. Pedro ngilla-*waka*-y (*tüfachi / *kechu / *küme)
P. buy-*cow*-3sS (*this / *five / *good)
'Pedro bought (*this / *five / *good) cow(s).'
b. Pedro ngilla-*waka*-y (*motri-le-chi)
P. buy-*cow*-3sS (*be.fat-STAT-ADJ)
'Pedro bought cow(s) (*that was/were fat).' [*BAG 2005*]
- The inability to strand DP-level material in Mapudungun is indicative of the structural reduction of the host NP from which N^0 moves.

(7) **Niuean PNI objects must be NPs**.
a. *Ne inu kofe [ne taute e au] a Sione
PST drink coffee N.FUT make ERG I ABS S.
'Sione drank coffee that I made.'
b. *Ne inu e kofe kona a Mele
PST drink ABS coffee bitter ABS M.
'Mele drank the bitter coffee.'
c. *Kua holoholo tau kapiniu a Mele
PRF wash PL dishes ABS M.
'Mele washes the dishes.'
d. *Ne vali fale ha Mele a Sione
PST paint house GEN M. ABS S.
'Sione paints Mele's house.' [*Massam 2001*]

What head-movement does in (P)NI

It satisfies the Capstone Condition!

Suppose that *x* is a noun:
- since *x* is neither T or D, it cannot satisfy (5.i);
- *x* can satisfy (5.ii) in one of two ways:
  - by being part of an extended nominal projection culminating in D(P);
  - if *x*, or a complex label containing *x*, **M-MERGES with the verb** — so long as the that verb ultimately satisfies (5.ii) in the usual way.

(P)NI objects are structurally reduced (7–8). They necessarily lack D^0.
⇒ (5) can only be satisfied via M-MERGER of (something containing) the noun to the superordinate verb.

Thus, we expect to find evidence head-head adjacency between N^0 and V^0.
- This is obviously true in NI (6);
- It's a bit harder to notice in PNI, but consider (8): (see also Baker 2014, Levin 2015)

(8) **Tongan PNI disallows pre-nominal modifiers**
a. Na'e tō 'e Sione 'ene (ki'i) manioke (ki'i).
PST plant ERG S. his (small) cassava (small)
'Sione planted his small amount of cassava.'
b. Na'e tō **(*ki'i)** *manioke* (ki'i) 'a Sione.
PST plant **(*small)** *cassava* (small) ABS S.
'Sione planted a small amount of cassava.' [*Ball 2005*]

There are languages which appear to instantiate the mirror image of (8)…

(9) **Chuj PNI requires pre-nominal modifiers**
Ix-in-man-w-i (niwak) kaxlan (*niwak-il).
PFV-B1S-buy-AG-IV fat chicken fat-REL
'I bought fat chickens.' [*Coon 2016*]

…but note: nothing says that it is necessarily N^0 that the adjacency requirement applies to; it could be some higher head in the nominal projection.

Overall, this captures the observation that less-than-complete extended projections cannot occur in syntax w/o special licensing (e.g. Grimshaw 2000).

Furthermore, it provides a reason for *why* (P)NI happens at all.

Comparison with *nominal licensing* approaches

Observation: per language, reduced nominals have licensing conditions that are *at least as stringent as* (and often times more stringent than) full DPs
- Ex.: there is no anti-Tongan (or anti-Chuj), where reduced/(P)NI nominals can have both pre- and post-nominal modifiers, but full DPs require head-head adjacency of N with the selecting V

It is not clear how this can be captured on an approach where this is all about nominal licensing (e.g. the Case Filter; Baker 1988, 1996); either:
- Reduced nominals require licensing ⇒ they should behave exactly like DPs
- Reduced nominals don't require licensing ⇒ none of these data are captured

Note also:
- Reduced objects in some lgs. can still be targeted for agreement (Baker 1988)
- Reduced nominals require licensing even in lgs. that show no evidence of DP licensing effects (Kornfilt & Preminger 2015, Levin 2016)