

## Possessor sub-extraction and its implications

**OVERVIEW.** We examine a type of external possession in which the possessor occurs in an A' position, and its possessum, an A position. We show that these are derived by movement of the possessor (i.e. via a null operator in a relative). While extraction of verbal arguments has been much discussed in languages with an Indonesian-type voice system (Aldridge 2008, Cole et al 2008, i.a.), we extend the discussion to nominals that are not verbal arguments (i.e. possessors are arguments of N). Possessor sub-extraction patterns show that (i) like verbal arguments, possessors must extract through the edge of VoiceP; and that (ii) both SpecCP and SpecTP may be simultaneously filled in Madurese (which does not allow object extraction); this has implications for analyses of CP/TP that invoke some version of feature Inheritance (Chomsky 2008) for these languages (Erlewine to appear, Legate 2011, i.a.).

**POSSESSOR SUB-EXTRACTION PATTERN #1.** In both Indonesian and Javanese, subjects may be freely extracted (illustrated in Indonesian in 1a), but arguments in object position may extract only with null voice marking (1b). A possessor can also sub-extract in (2): the possessor occurs at the left periphery, followed by the relative morpheme *yang*. Importantly, (2) shows the same pattern as (1), in which extraction from object (but not subject) requires null voice marking (2b).

*Indonesian (n.b. Javanese displays a similar pattern)*

- |       |   |  |
|-------|---|--|
| 1) a. | Rumah Adi yang di-rata-kan.<br>house Adi Rel PV-flat-Appl<br>'It is Adi's house that was destroyed.'            | Subject extraction                                     |
| b.    | buku Rini yang kita Ø-/*mem- baca<br>book Rini Rel 1pl Ø/AV read<br>'Rini's book that we read'                  | Object extraction (with<br>null voice prefix)          |
| 2) a. | Adi yang rumah-nya di-rata-kan.<br>Adi Rel house-Def PV-flat-Appl<br>'It is Adi whose house was destroyed.'     | Sub-extraction from subject                            |
| b.    | gadis yang kita Ø-/*mem- baca buku-nya<br>girl Rel 1pl Ø/AV read book-Def<br>'the girl that we read (her) book' | Sub-extraction from object<br>(with null voice prefix) |

**PATTERN #2.** In Madurese, subjects may extract, but objects cannot, even with null voice prefix (Davies 2010). Similarly, possessors may sub-extract from subject (3a), but not object (3b):

*Familiar Madurese*

- |       |   |                             |
|-------|---|-----------------------------|
| 3) a. | Sapah se buku-nah e-bacah ale'?<br>who Rel book-Def PV-read younger.sib<br>'Who is it that (his) book was read by brother?' | Sub-extraction from subject |
| b.    | *Sapah se engko' Ø-/m- baca buku-nah?<br>who Rel 1sg Ø/AV read book-Def   | *Sub-extraction from object |

Thus the ability of possessors to undergo A' extraction is predictable in Indonesian, Javanese and Madurese: if matrix DP may extract, then its possessor may sub-extract, and *vice versa*.

**A MOVEMENT ANALYSIS.** We take obligatory null voice marking in active clauses (1b, 2b) as a diagnostic of possessor movement from object position, rather than base generation of the possessor in a high position. A movement analysis also captures the difference between (3a) and (3b), since subject extraction, but not object extraction, is licit in Madurese; base generation account does not explain the contrast. In support of a movement analysis, we argue that Indonesian *-nya* in (2) is not a

resumptive pronoun (*pace* Chung 2008, Sedeng 2015) but is only definite marking: in possessive DPs such as *buku(-nya) gadis itu* ‘the book of that girl,’ the definite suffix *-nya* is optional, but in the absence of an overt possessor (i.e. including a moved possessor), *-nya* must be pronounced. A parallel analysis applies to Javanese *-(n)e* and Madurese *-nah* in possessive DPs.

**IMPLICATION I: Successive cyclic movement through VoiceP.** In languages of the area, voice morphology on V is known to be implicated in the movement of arguments (Aldridge 2008, Cole and Hermon 2008, Legate 2014, Yanti 2010, i.a.). We observe that voice morphology must reflect all DPs moving out of VoiceP, not just verbal arguments.

I assume external arguments are merged in the specifier of the verbal projection VoiceP, from where they may be directly probed by C for A' movement; Voice<sup>0</sup> does not need to attract this DP with an edge feature. Internal arguments, however, must move through the edge of VoiceP to be extracted in an active clause; this requires the edge feature [D] on Voice, which attracts internal arguments and possessors to Spec, VoiceP, where they are available for further A' movement. The possessor movement in (2b) is illustrated below (simplified VoiceP shown):

4) [<sub>VoiceP</sub> gadis [<sub>Voice<sub>[D]</sub></sub> [<sub>VP</sub> baca [<sub>DP</sub> gadis buku-nya gadis ] ] ] ]

Voice<sup>0</sup>, then, regulates movement of all DPs from within VoiceP. Note that null voice morphology is required for both argument DPs (1b) *and* non-argument possessors (2b). Thus possessor movement allows us to separate two distinct issues: 1) voice morphology as a reflex of DP movement (showing the position from which the DP has moved out of VoiceP), or 2) morphological voice marking that reflects the first-merged position of its arguments. Possessor movement shows us that the first view must be correct.

**IMPLICATION II: The left periphery.** Various theories of feature Inheritance, based on the close relationship between C and T, have been proposed to explain Austronesian extraction facts (e.g. Aldridge to appear, Erlewine to appear, Legate 2011). The data above pose new challenges to these analyses. For example, (3a) demonstrates that even though Madurese does not allow object extraction, A' and A positions (CP and TP) may be simultaneously occupied. (3a) is evidence that a combined A'/A (C-T) position cannot account for the unavailability of object extraction in Madurese (cf. Legate 2011). However, a theory of C-T head-splitting such as proposed in Erlewine, to appear (for the Austronesian language Toba Batak) may account for the possessor sub-extraction patterns in these languages: a combined C-T head probes for a goal (i.e. a focused DP), but if none is found, then the head splits into the traditional roles of C and T. This type of theory correctly rules out possessor sub-extraction from Patient which does not raise to subject in a passive clause (i.e. the Patient remains in situ within VP).

**SELECTED REFERENCES.** Aldridge, E. 2008. Phase-based account of extraction in Indonesian. *Lingua* 118. Aldridge, E. To appear.  $\phi$ -Feature Competition: A unified approach to the Austronesian extraction restriction. *Proceedings of CLS52*. Chomsky, N. On phases. In *Foundational Issues in Linguistic Theory: Essays in Honor of J-R. Vergnaud*. MIT Press. Chung, S. 2008. Indonesian clause structure from an Austronesian perspective. *Lingua* 118. Cole, P. & G. Hermon. 2005. Subject and non-subject relativization in Indonesian. *JEAL* 14. Cole, P., G. Hermon & Yanti. 2008. Voice in Malay/ Indonesian. *Lingua* 118. Davies, W. 2010. *A Grammar of Madurese*. Walter de Gruyter. Erlewine, M.Y. To appear. Multiple extraction and voice in Toba Batak. *Proceedings of AFLA 23*. Legate, J. A. 2011. Under-inheritance. Presentation given at NELS42. Legate, J. A. 2014. *Voice and v: Lessons From Acehnese*. MIT Press. Rackowski, A. & N. Richards. 2005. Phase edge and extraction: A Tagalog case study. *LI* 36. Sedeng, I. N. 2015. Syntactical marker {-nya} in Indonesian. *Retorika: Jurnal Ilmu Bahasa* 1. Yanti. 2010. Reference Grammar of Jambi Malay. Ph.D diss, Univ. of Delaware.