

Malay tough movement and voice matching

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Introduction: I discuss novel tough movement (TM) data from Malay and argue that it provides support for voice restructuring (Wurmbrand & Shimamura 2017, W&S) and phase extension (Den Dikken 2007).

Malay TM: Crosslinguistically, English-type TM has A'-movement in the embedded clause (Postal 1971) and German-type TM has long A-movement (Wurmbrand 2001). In this paper, I discuss novel Malay TM.

- 1) a. Adalah senang (untuk men-yakinkan Ali) [untuk **me**-masak ayam]
 COP easy C ACT-convince Ali C ACT-cook chicken
 'It was easy (to convince Ali) to cook chicken.'
 b. Ayam_i senang (* untuk men-yakinkan Ali) [untuk *(**di**)-masak ____i]
 Chicken easy C ACT-convince Ali C PASS-cook
 'Chicken was easy (*to convince Ali) to cook.'

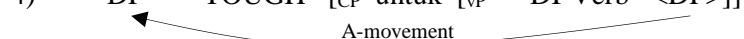
(1a) shows the expletive construction which has a copular element in the matrix clause. This construction allows additional embedding. (1b) shows TM where the embedded logical object is realized as the matrix subject. Additional embedding is not allowed. Following Wurmbrand's (2001) argument for German, (1) shows that Malay TM also only has A-movement. Furthermore, this is long A-movement. This is supported by the distribution of the Malay negators, *bukan* and *tidak*.

- 2) Saya {*bukan/ tidak*} harus {**bukan/ tidak*} makan, tetapi ...
 1SG NEG must NEG eat but
 'I am not required to eat, but...' (Kroeger 2014: 154)

Based on data like (2) showing the relative positions of the negators and the modal *harus* assumed to occur in I, Kroeger (2014) argues that *tidak* can be adjoined to vP whereas *bukan* must occur higher. Using the negators as a diagnostic, we can see that the embedded clause in Malay TM is at most a vP.

- 3) Ayam_i senang [untuk **bukan/ tidak* **di**-masak ____i].
 Chicken easy C NEG PASS-cook
 'Chicken is easy to not cook.'

Based on (2) and (3), Malay TM is proposed to have the following derivation.

- 4) DP TOUGH [_{CP} untuk [_{vP} DI-Verb <DP>]]


The embedded object long A-moves to matrix Spec, TP across the non-finite complementizer.

Voice in the embedded clause: The embedded clause in Malay TM must have the passive marker *di*.

- 5) a. Ali **me**-masak ayam b. Ayam **di**-masak (oleh Ali)
 Ali ACT-cooked chicken Chicken PASS-cook by Ali
 'Ali cooked chicken.' 'Chicken was cooked (by Ali).'

(5) shows the canonical uses of the Malay active and passive markers. The embedded clause in Malay TM is obligatorily passive unlike German which disallows passive voice in TM (Wurmbrand 2001). Note the difference in the embedded clauses in (1a) and (1b). Thus, although Malay TM has the long A-movement analysis that Wurmbrand (2001) proposes for German, the embedded clause in (1b) cannot just be a VP.

Source of passive voice: The passive voice is not due to general voice restrictions on extraction seen in Austronesian languages like Tagalog (Rackowski 2002) and Malay (Cole & Hermon 2005).

- 6) Apa_i Ali (***mem**)-masak ____i
 What Ali ACT-gave
 'What did Ali cook?'

(6) shows that A'-movement of a direct object in Malay requires a verb with null voice morphology not the *di* marker. However, Malay TM as shown in (1b) must have the *di*- marker, it cannot be bare. This passive voice in Malay TM is not due to relativized minimality (Rizzi 1990) either. In this view, passive voice is required to suppress an embedded external argument PRO in (1a) so that the lower object can raise past Spec, vP. However, there is no such external argument in the first place as can be seen in (7).

- 7) *Ali_i senang [(untuk) [_{vP} ____i me-masak nasi ayam]].
 Ali easy for act-cook chicken rice
 Lit: 'Ali is easy to cook chicken rice.'

If (1a) had an embedded external argument PRO, then (7) where this external argument is A-moved to the matrix Spec, TP should be grammatical. The ungrammaticality of (7) indicates the absence of an external argument PRO in (1a). Thus, passive should not be required in Malay TM to avert a minimality violation.

Voice restructuring: I adopt W&S's claim that long A-movement in restructuring requires a special voice head, v^R. W&S propose that voice heads are usually valued for two features: the voice value itself and phi features of the external argument. However, v^R copies its voice and phi values from the matrix v head.

- 8) DP_i T [_{vP} V_{[voice: NON-ACT][iφ: EXP]} [_{v^RP} V^R_{[voice: NON-ACT][iφ: EXP]} <DP_i>]]

This theory can explain the voice matching requirement in Malay TM. (8) shows the TM schema with long A-movement, assumed to be triggered by matrix T probing the DP. The matrix v head is non-active (as it is unaccusative) and its phi features are valued by the implicit matrix experiencer (an idea adapted from Legate's 2012 treatment of passive). The embedded v head is v^R which, by hypothesis, disallows an external argument and copies both its voice and phi values from the matrix v head (shown underlined). Voice feature copying results in an embedded clause in Malay TM which is non-active, i.e. realized as passive. Phi feature copying results in the obligatory matrix experiencer control reading.

Optionality of TM: Wurmbrand (2001) proposes that optional long A-movement in German indicates that the matrix predicate can optionally select a restructured complement or not, where a restructured complement is assumed to be a clause without an external argument. Malay also exhibits optional A-movement as seen in (1) but both (1a) and (1b) lack an external argument. The lack of such an argument in (1a) is supported by the ungrammaticality of (7). I propose that partial v^R better explains optionality.

- 9) a. Partial restructuring voice: v^R_{[voice: α][iφ: ___]} b. Full restructuring voice: v^R_{[voice: ___][iφ: ___]}

Partial v^R needs to copy only the phi features of the matrix voice head as shown in (9a). This is why the embedded clause in (1a) lacks an external argument but can have independent voice valuation. In this view, optionality of long A-movement reduces to whether a restructuring predicate can select partial v^R or only full v^R. Thus, German TM which does not have an expletive variant, only allows full v^R, unlike Malay.

Full v^R and phase extension: W&S propose that all restructuring contexts require (full) v^R, whereas in my view, restructuring without long A-movement exists, i.e. (1a). In the proposal here, full v^R is required if and only if long A-movement takes place. I propose a Den Dikken (2007)-type phase extension analysis for why full v^R is correlated with long A-movement. In this view, full v^R which replicates the matrix voice head, extends the phasal domain of the embedded vP. This extension allows the matrix T to probe the in situ embedded DP and trigger its movement to Spec, TP without violating the PIC. I assume a phase (vP or finite CP) is spelled out when a higher phase head is merged. If v^R is partial, the matrix voice head and v^R are non-identical and phase extension does not take place. In this case, matrix T cannot probe the embedded DP in situ. This results in the expletive construction in (1a). Head movement, which is how phase extension is implemented by Den Dikken (2007), cannot apply to Malay as there is a distinct voice head in the embedded clause. This is unexpected if the lower v has indeed moved to the higher v.

This theory of phase extension in restructuring is shown to apply straightforwardly to Hindi long-distance agreement (Bhatt 2005). One key implication of this analysis is that A-movement cannot use the vP edge as an escape hatch. This is shown to arise from a general restriction on A-movement to phase edges.