

Balinese Pseudo-Noun Incorporation: Licensing under Morphological Merger

Head Movement of a nominal into a verb (Noun Incorporation) has two consequences. The nominal is adjacent to the verb and is (possibly) licensed without Case (Baker 1998). This raises the question of whether Head Movement *or* the head-head adjacency it creates is responsible for licensing. In this talk, I argue for the latter based on properties of Balinese (Austronesian) Pseudo-Noun Incorporation (PNI). Balinese PNI is not an instance of string-vacuous Head Movement (Baker 2012) or a bare NP (Massam 2001). Rather, Balinese PNI involves a caseless nominal, whose head happens to be adjacent to V^0 . Head-head adjacency licenses that nominal via Morphological Merger (Marantz 1984).

Background: Voice and Case in Balinese: Balinese exhibits two transitive voices – Objective Voice (1a) and Agentive Voice (1b):

- (1) a. jaran-e gugut cicing Theme Verb Agent
horse-DEF OV.bite dog
b. cicing ngugut jaran-e Agent N-Verb Theme
dog AV.bite horse-DEF
'A dog bit the horse.'

Wechsler and Arka (1998; W&A) argue that regardless of thematic role, the preverbal element occupies [Spec, TP]. Following Aldridge (2008), Levin (2012) argues that the voice alternation displayed in (1) arises from a parameterization of v^0 . In (1a), v^0 assigns no Case but triggers object shift of the Theme above the Agent. T^0 then assigns Case to the Theme. In this configuration the Agent is left caseless – a potential Case Filter violation (Chomsky & Lasnik 1977). To avoid such a violation the post-verbal Agent undergoes PNI. (1b) proceeds as in English, with a distinct v^0 , realized as a nasal prefix on the verb, licensing the Theme and T^0 licensing the Agent.

Evidence for PNI in OV: Post-verbal Agents (*cicing* in (1a)) display some properties consistent with either Massam (2001) or Baker (2012)'s account of PNI. These properties are given in (2-4):

- (2) **Post-verbal full nominals must be indefinite.**
I Wayan gugut cicing/*cicing-e ento
ART W. OV.bite dog dog-DEF that
'A/*the dog bit Wayan' [W & A, p. 401]
- (3) **No element can intervene between a post-verbal Agent and the verb.**
a. siap-e uber cicing ke jalan-e S V O_{Agent} PP
chicken-DEF OV.chase dog into street-DEF
'A dog chased the chicken into the street.'
b. uber cicing ke jalan-e siape-e V O_{Agent} S PP
c. *uber siap-e cicing ke jalan-e *V S O_{Agent} PP
d. *siap-e uber ke jalan-e cicing *S V PP O_{Agent} [W & A, p. 405]
- (4) **Post-verbal Themes (4a), but not post-verbal Agents (4b), can undergo *wh*-movement.**
a. buku cen John maca. b. *anak cerik cen be-e daar
book which J. AV.read person small which fish-DEF OV.eat
'Which book did John read?' ('Which boy ate the fish?') [fieldwork]

This behavior is expected if an NP, not a DP, has fused with the verb through Head Movement (Baker 2012), or cannot move due to its NP-status (Massam 2001). However, additional data from Balinese cannot be captured by the previous analyses of PNI, but can be under Morphological Merger

An Argument against Massam (2001): The modifier *liu* 'many' can appear pre- or post-nominally elsewhere (5), but must appear post-nominally when modifying post-verbal Agents (6).

- (5) (liu) cicing (liu) ngugut Nyoman (6) Nyoman gugut (*liu) cicing (liu)
many dog AV.bite N. N. OV.bite dog many
'Many dogs bit Nyoman.' 'Many dogs bit Nyoman.'

The rigidity in NP-internal word order cannot be accounted for in Massam's analysis without further modification. An inert NP should not display any NP-internal word order effects. However, if PNI must be string vacuous Head Movement (e.g. Baker 2012) or, as I suggest, the result of Morphological Merger

both of which require strict linear adjacency between heads, then the behavior of *liu* has a straightforward explanation. Only if the modifier *liu* follows the head noun will the head be linearly adjacent to the verb.

An Argument against Baker (2012): Baker suggests that *only* NPs generated in [Compl,V] can undergo PNI. This is not the case for Balinese. Themes, regardless of their position, *never* undergo PNI. Above, we saw that pre-verbal Themes do not display NP-internal word order restrictions (5), and that post-verbal Themes can be *wh*-moved (4). (7-8) provides further confirmation that Themes never undergo PNI.

(7) **Themes can be definite.**

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|---|---|
| a. Wayan η-uber cicing-e
W. AV-chase dog-DEF
'Wayan chased the dog.' | b. cicing-e uber Wayan
dog-DEF OV.chase W.
'Wayan chased the dog.' |
|---|---|

(8) **Themes can be separated from the verb.**

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|---|---|
| a. Wayan η-uber keras-keras cicing-e
W. AV-chase quickly dog-DEF
'Wayan chased the dog quickly.' | b. cicing-e keras-keras uber Wayan
dog-DEF quickly OV.chase W.
'Wayan chased the dog quickly.' |
|---|---|

This scenario is typologically rare. Other languages which have been argued to display Agent PNI also display Theme PNI (e.g. Turkish (Öztürk 2009) and Hungarian (Farkas & de Swart 2003)). However, if we assume that Balinese PNI arises to prevent a Case Filter violation, it follows that only the post-verbal Agent, at risk of not receiving Case, incorporates in order to be licensed. More problematic for Baker (2012) is that Agent Incorporation – not only in Balinese, but Turkish and Hungarian as well – requires Head Movement from a non-complement position – [Spec, vP]. Such movement is deemed illicit under the Head Movement Constraint (Travis 1984, Hale & Keyser 1992). If Morphological Merger is responsible for linear adjacency, then there are no HMC violations to contend with.

Morphological Merger: If Head Movement is not the correct means to enforce linear adjacency, we must provide another mechanism with similar effect. At PF, the V+T complex in OV is linearly adjacent to the Agent NP in [Spec, vP]. I suggest that when the head of that NP is linearly adjacent to T⁰, Morphological Merger takes places bracketing T⁰ and the head (H⁰) as in (9).

(9) *Morphological Merger* (Marantz 1984)

$$T^0 [_{HP} H^0] \rightarrow [T^0 + H^0]$$

I posit that this post-syntactic operation simultaneously enforces adjacency and ameliorates the Case Filter violation. As Bobaljik (1994) notes, such merger does not need to be realized overtly as affixation, and it is not realized as such in Balinese. If this is the case, one might wonder if the proposed analysis, with some language-specific modifications, can capture all instances of PNI and true Noun Incorporation.

The proposed account captures another typologically rare trait of Balinese PNI. Unlike, definite descriptions (2), other DPs – pronouns (10a) and proper names (10b) – can appear in post-verbal position.

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| (10) a. be-e daar ida
fish-DEF OV.eat 3 rd .sg.
'(S)he ate the fish.' | b. be-e daar Nyoman
be-DEF OV.eat N.
'Nyoman ate the fish.' |
|--|---|

This observation poses another problem for Baker and Massam who state that only NPs can undergo PNI. One might wonder if post-verbal DPs are have incorporated. The fact that post-verbal DPs display the same linearity requirements as NPs, seen in (3), suggests they have.

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| (11) a. *be-e daar keras-keras ida
fish-DEF OV.eat quickly 3 rd .sg
'(She ate the fish quickly.)' | b. *be-e daar keras-keras Nyoman
fish-DEF OV.eat quickly N.
'(Nyoman ate the fish quickly.)' |
|--|--|

The Morphological Merger account provides a solution to the puzzle of why pronouns and proper names can incorporate but definite descriptions cannot. As seen in (2), the definite morpheme *-e* and the definite determiner *ento* 'that' appear to the right of the NP. If PNI requires linear adjacency between the incorporating head – N⁰ or D⁰ – with the verb then the intervening NP in (2) blocks PNI. However, pronouns, which occupy D⁰ and lack a NP complement (e.g Postal 1966, Elbourne 2001), *can* be realized adjacent to the verb. Similarly, proper names have been argued to move into D⁰ (Longobardi 1994). Here too, PF adjacency with the verb holds as there is no intervening NP material.