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 V₀. 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-ē gugut cicing
   horse-DEF OV.bite dog
   Theme Verb Agent
   ‘A dog bit the horse.’

2. b. cicing gugut liu jaran-ē
   Agent N-Verb Theme
   dog AV.bite horse-DEF
   ‘Many dogs bit Nyoman.’

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 V₀. In (1a), V₀ assigns no Case but triggers object shift of the Theme above the Agent. T⁰ 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 V₀, realized as a nasal prefix on the verb, licensing the Theme and T⁰ licensing the Agent.

**Evidence for PNI in OV:** Post-verbal Agents (cicing in (1a)) display some properties consistent with either Massam’s (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-ē 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-ē uber cicing ke jalan-ē
      chicken-DEF OV.chase dog into street-DEF
      ‘A dog chased the chicken into the street.’

   b. uber cicing ke jalan-ē siap-ē
      V OAgent S PP
      ‘A dog chased the chicken into the street.’

   c. *uber siap-ē cicing ke jalan-ē
      V S OAgent PP
      ‘A dog chased the chicken into the street.’

   d. *siap-ē uber ke jalan-ē cicing
      S V PP OAgent
      ‘A dog chased the chicken into the street.’

4. **Post-verbal Themes (4a), but not post-verbal Agents (4b), can undergo wh-movement.**

   a. buku cen John maca.
      book which J. AV.read
      ‘Which book did John read?’

   b. *anak cerik cen be-e daar
      person small which fish-DEF OV.eat
      (‘Which boy ate the fish?’) [fieldwork]

   c. cicing
dog
   ‘Many dogs bit Nyoman.’

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
   many dog AV.bite N.
   ‘Many dogs bit Nyoman.’

6. Nyoman gugut (liu) cicing
   N. OV.bite dog many
   ‘Many dog 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.**
   a. Wayan ṅ-uber cicing-e
   b. cicing-e ṅ-uber Wayan
   W. AV-chase dog-DEF
   ṅ-uber
   ‘Wayan chased the dog.’
   ‘Wayan chased the dog.’

8. **Themes can be separated from the verb.**
   a. Wayan ṅ-uber keras-keras cicing-e
   b. cicing-e keras-keras ṅ-uber Wayan
   W. AV-chase quickly dog-DEF
   keras-keras ṅ-uber
   ‘Wayan chased the dog quickly.’
   ‘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 ṭ⁰, Morphological Merger takes places bracketing ṭ⁰ and the head (H⁰) as in (9).

9. **Morphological Merger** (Marantz 1984)
   ṭ⁰ [H⁰] → [Ṭ⁰+H⁰]

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.

10. **(a) be-e daar ida**
    fish-def OV.eat 3rd.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.

11. **(a) *be-e daar keras-keras ida**
    fish-def OV.eat quickly 3rd.sg
    ‘(S)he 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.