Derive case successive-cyclically in Amis clauses and gerunds

This paper proposes a successive-cyclic case assignment analysis for Amis (Central dialect; Formosan) main clauses and gerunds, following a dependent case model (Marantz 1991, Levin 2016). I argue that *(i) how case is realized morphologically is determined by the highest category-determining head in a spell-out domain.* I show that Amis roots are category-neutral, nominalized by *n*, and verbalized when *v* is merged. Merger of *v* prompts spell-out of its complement, in which *n* is the highest category-determining head. As a result, case realization at *v*P parallels that at the highest level of gerunds, but differs from that at the highest level of (verbal) main clauses. In addition, I propose that *(ii) perfectives in Amis involve Agree between the Asp(ect) head and the agent* (cf. Bjorkman 2011). When this Agree relationship occurs, *the agent becomes invisible to further case assignment.* Case contrasts among differently *voice*-marked clauses in Amis are commonly attributed to *voices* themselves. I show, however, that such contrasts disappear in gerunds. I argue that case contrasts are in fact controlled by aspect. Taking into account (i) and (ii), I demonstrate how a successive-cyclic case analysis derives case patterns in Amis main clauses and gerunds, while maintaining a uniform treatment of genitive case.

 Nominal Roots Unmarked roots parallel (entity) nouns in case marking and distribution. First, in (1, **bolded**), *ina*, the sole DP *ulah/cudad* occurs with, receives genitive (GEN). When two DP's are present, the higher DP gets GEN and the lower DP accusative (ACC). Second, in the clause-initial predicate position (1), both unmarked roots and nouns, but not inflected roots, are preceded by *u*. Third, Amis uses light verbs (*v*) to verbalize the roots, e.g. **mi-***nengneng* and *nengneng-**en*** in (2). Crucially, these *v*'s can also attach to nouns directly, e.g. *nanum* 'water,' **mi-***nanum*, *nanum-**en*** 'to drink.'

(1)   U   **ulah/cudad ni**   **ina**   **(tu pusi)** ku   ka-ngalay-an aku
       NEU love/book   GEN mother ACC cat   NOM STA-want-LV GEN.1SG
       'Mother's love (of cats)/ Mother's book (about cats) is what I want.'

(2) a. **Mi-nengneng** ci   Nikar tu   tilifi.   b. **Nengneng-en** ni   Nikar ku   tilifi.
       M+PI-see   NOM PN ACC TV   see-EN   GEN PN NOM TV
       'Nikar is watching the TV.'   'Nikar (will) watch(ed) the TV.'

I posit that *Amis verbs contain category-neutral roots* that are nominalized by *n*, and project up to *n*P. Both arguments are merged within *n*P, which is verbalized by *v* (3). Assuming *v* and C are phase heads, once merged, their domain undergoes spell-out. As (1) shows, roots assign case in a way that is captured if *GEN is the unmarked case, and ACC the dependent case, in a nominal domain.* I refer to this as *nominal case assignment.* I propose case assignment at *v*P is nominal because the spell-out domain contains *n*.

(3) $[_{vP}[v\ pi\text{-}/\text{-}en\ ][_{nP}[_{DP}$ Agent $][_{n'}\ [n]\ [_{RootP}\ [\ \sqrt{nengneng}$ 'see' $]\ [_{DP}$ Patient $]]]]]$

 Cyclic Case Observe that (2a) and (2b) differ not only in verbal morphology (*mi-* and *-en*), but also in case patterns. *Mi-* and *-en* are commonly termed Actor Voice (AV) and Patient Voice (PV), reflecting whether the agent or patient receives nominative (NOM). In addition, AV patient is marked ACC and PV agent GEN. I propose Amis assigns case by **two rules: (R1)** *If there are two DPs in the same phase such that DP$_1$ c-commands DP$_2$, and if DP$_1$ is unmarked for case, assign ACC to DP$_2$.* **(R2)** *If a DP does not receive dependent case, it is realized as NOM in a verbal domain, and GEN in a nominal domain.* I further posit that *the highest category-determining head (e.g. n, v) in a spell-out domain determines whether it is nominal or verbal.* (4) demonstrates how (R1-2) derive case patterns in (2). When *v* is merged and triggers spell-out of *n*P (4a): (R1) assigns ACC to the patient in both (2a-b), and (R2) assigns GEN to the agent, given only *n* is present and thus, this is a nominal domain. I assume for now that the PV agent in

(2b) becomes invisible to case assignment beyond vP (to be explained shortly). When C is merged (4b), (R1) assigns ACC to the patient in (2a), and (R2) assigns NOM to the agent in (2a), and the patient in (2b), given the domain contains v, above n. Note that an argument needs not move into a higher phase to enter another case assignment. Besides deriving the VSO order (assuming verb movement), this is supported by data on Principle C, reflexive, and pronominal variable binding. All show that *the PV agent c-commands the internal argument(s)*, even though only the latter enters the second case assignment.

(4)

Phase	AV	PV
a. **vP**	GEN.agent ACC.patient	GEN.agent ACC.patient
b. **CP**	NOM.agent ACC.patient	~~GEN.agent~~ NOM.patient

Perfective (2) shows that *mi-* and *-en* clauses are imperfective and perfective, respectively. This perfective reading extends to the two applicatives in Amis, which are commonly grouped with PV as non-Actor Voices (NAV). *All NAV clauses have in common both the perfective reading and GEN marking on the agent.* This is reminiscent of languages where subjects in perfect(ive)s are differentially marked. Bjorkman (2011), building on earlier works on auxiliaries (Kayne 1993, a.o.), argues that perfect(ive)s contain an Asp head with a D/P-related feature. In some languages, Asp Agrees with the subject and differential subject marking reflects the D/P feature. I propose that all clauses in Amis contain an Asp head above vP. In an AV clause, Asp is unspecified, interpreted as imperfective by default, and is realized as *m-* (i.e. *mi-* in (2a) is *m-* plus *pi-*, which appears in this form in non-indicatives). In an NAV clause, e.g. (2b), Asp contains an [μD], valued by Agree with the agent. The agent then becomes invisible to later case assignment. Another difference between AV and NAV clauses supports this: *NAV agents cannot be separated from the verb by another argument*, but can be, by a temporal/locative phrase. That is, the patient can precede the agent only in (2a). I posit that this is because in (2b), the presence of another argument blocks Agree between Asp[μD] and the agent.

Gerunds The proposal predicts when Agree between Asp and the agent is not required, (i) the agent should remain visible to further case assignment, (ii) another argument can precede the agent, and (iii) the interpretation should be imperfective. This holds not only of AV clauses, but also of gerunds in (5). Observe first *the case contrast between AV and PV main clauses disappears in gerunds.* I posit that gerunds differ from main clauses in that merger of D (cf. *ya* in (5)), above the nominalizer, triggers the second case assignment. The domain is nominal given the nominalizer. Applying (R1) derives (4a)) again at vP. Next, merger of D prompts another nominal assignment to *both arguments*, yielding identical results as (4a). These are exactly what we found in (5). This is possible because the PV agent in (5) remains visible at the second spell-out, unlike in (4b). This suggests *Asp-agent Agree* does not happen in (5). Two predictions of this proposal are borne out: (i) the patient can precede the agent, and (ii) the interpretation is imperfective.

(5)   ... ya   pi-nengneng/ nengneng-en {ni   Nikar tu   tilifi}/ {tu tilifi ni Nikar}.
       ... that PI-see/   see-EN   GEN PN   ACC TV
       '(Mother is angry at) Nikar's watching the TV.'   *(AV and PV gerunds)*

We also predict that if a gerund contains Asp[μD], *Asp-agent Agree* should make the agent invisible to further case assignment. We expect two GEN arguments after the second nominal assignment, and the patient can precede the second GEN argument, and the interpretation should be perfective. This is attested for some speakers, as (6) shows.

(6)   ... tu   pa-rakat-en   **ni   Nikar** {***nu-ya   wawa*** tu   cudad}/ {tu cudad nuya wawa}.
       ... ACC CAUS-walk-EN GEN PN   GEN-that child   ACC book
       '(Mother told father about) Nikar's having sent (a) book(s) to that child.'

Selected references: Bjorkman, B. 2011. be-ing Default: the Morphosyntax of Auxiliaries. PhD Dissertation, MIT. Levin, T. 2016. Successive-cyclic case assignment: Korean nominative-nominative case-stacking. *NLLT*: 1-52.