The role of intentionality and enablement in associated motion

I. Introduction: Recent typological literature such as Guillaume & Koch 2021 has identified several grammaticized means of incorporating motion events into semantic representation. In this paper, we focus on Associated Motion (**AM**), a category describing bound verbal morphology that adds a requirement for a translational motion event to the event description introduced by the main (non-motion) verb. Unlike Motion-cum-Purpose constructions (cf. Haviland (1993), Zavala Maldonado (2000)), sentences with AM entail the existence of both the motion event, e_{mot} and the event described by the main lexical/content verb, e_V.

The only prior formal semantic account of such a system that we are aware of is given by Duff (2021, 2024) for AM in Santiago Laxopa Zapotec (SLZ). Duff argues that, in addition to the existence of the motion event and its basic properties (e.g. towards a deictic center vs. other motion), SLZ AM encodes two entailments regarding the relationship between e_{mot} and e_V: ① ENABLEMENT – e_{mot} enables e_V (i.e. is weakly causally necessary for it), and ② INTENTIONALITY – the agent/subject of the clause intends for e_V to take place.

This paper: we analyze a pair of motion-introducing verbal suffixes in A'ingae (isolate, Ecuador/Colombia, ISO: con): *-'nga* AND 'go and X' and *-'ngi* VEN 'come and X'. We argue that despite conveying similar meanings in simple examples like (1-2), these morphemes do not entail ① and ②. Drawing on corpus examples and primary fieldwork, we instead propose that AM entails that only e_{mot} is intentional and imposes a weaker spatio-temporal relation between e_{mot} and e_V rather than a causal one, with ① and ② arising as implicatures.

(1) Kani=ngi pa'khu kuse an'dyu-**'nga**-'fa.
Yesterday=1 all night dance-AND-PLS
'Yesterday we went and danced all night.'

(2) Juan=tsû ña=i'khû afa**-'ngi**.
Juan=3 1SG=INST speak-VEN
'Juan came to speak with me.'

II. Enablement: For SLZ, Duff 2021 argues that e_{mot} need not cause e_V per se, but that there nonetheless is a requirement for some sort of weaker causal connection between the two, ①. Drawing on Truswell (2011), he calls this relation ENABLEMENT, defined as "the occurrence of e_1 positively influences the occurrence of e_2". While listeners indeed infer something like this in many examples in A'ingae, AM in A'ingae is also entirely felicitous in contexts like (3), which Duff shows are not possible in SLZ. We thus conclude that A'ingae does not require a causal connection between the events, merely a spatiotemporal connection (see IV below).

(3) **Context:** Carmen dances everywhere she goes. She came over with her mom and danced as I cooked.
Carmen=tsû and'yu-'ngi.
Carmen=3 dance-VEN
'Carmen came and danced.'

III. Intentionality: In addition to the causal connection between e_{mot} and e_V, ①, Duff 2021 also argues for SLZ that there is an entailment, ②, that the shared agent of the two events intends for e_V. Duff unites these observations by claiming that e_{mot} must be part of the agent's plan to cause e_V. While A'ingae AM can convey this, we see in (4) that, unlike SLZ, this is merely an implicature:

(4) **Context:** María didn't see a banana peel on the ground, so she came and slipped.
Thiyakhu-ye chi'ga-'ma=tsû thiyakhu-'ngi.
slip-INF not.want-FRUS=3SUBJ slip-VEN

'Although she didn't want to slip, she came and slipped.'

We do find, however, that e_{mot} must be intended by the shared subject. For this reason, AM requires an animate subject even for main verbs that do not, such as *phuru* 'bump into' in (5). Relatedly, we find that – unlike in SLZ – main verbs in A'ingae AM may be passivized.

(5) (Dûshû/*kini'khu-'chu)=tsû phuru-'nga tûtûkhu'chu=nga.
(child/*wood-CLF:ROUND)=3 bump-AND land.turtle=DAT
'The (child/*driftwood) went and bumped into the turtle.'

IV. Spatiotemporal relation: While no causal connection is entailed between e_{mot} and e_V, a spatiotemporal connection is still required. e_{mot} not only must precede e_V, but the end of e_{mot} must more or less overlap with e_V. In addition to the the location that is the endpoint of e_{mot} must also be the location for (the start of) e_V. In A'ingae, this "goal location" is in fact an ordinary argument introduced be the AM marker (cf. Pakendorf & Stoynova (2021) for a similar claim for some Tungusic languages). This argument can be realized via an overt dative as in (6), or via pro-drop when contextually available. Note that this goal location argument is not otherwise licensed by the main verb *afa* 'speak' in (6).

(6) **Context:** Joaquín lives in Dureno, and has an important meeting with the president of Ecuador in Quito. He went to Quito to have his meeting.
Joaquín=tsû afa*(-'nga) na'sû-'khû Quito=nga.
Joaquín=3SUBJ speak*(-AND) chief-INST Quito=DAT
'Joaquín *(went) to Quito to speak with the president.'

V. Our analysis: A'ingae AM carries entailments that (i) some e_{mot} and e_V exist, (ii) e_{mot} is intentionally carried out by the subject, (iii) e_{mot} has goal location ℓ, and (iv) e_{mot} precedes e_V, with ℓ the starting location for e_V. (iv) may be recast as an entailment that the post-state of e_{mot} overlaps the pre-state of e_V, paralleling the NARRATION relation given by e.g. Altshuler (2016) between discourse units. We then propose a semantics for (6) as follows.

$$[\![(6)]\!] = 1 \text{ iff } \exists e_{mot}, e_V \left[\begin{array}{c} \textsc{go}(e_{mot}) \wedge \textsc{goal}(e_{mot}, q) \wedge \textsc{int-agent}(e_{mot}, j) \\ \wedge\ \textsc{post}(e_{mot}) \approx \textsc{pre}(e_V) \wedge \textsc{speak}(e_V) \wedge \textsc{agent}(e_V, j \oplus p) \end{array} \right]$$

(where $j =$ Joaquín, $\quad q =$ Quito, $\quad p =$ the president of Ecuador).

We assume a similar picture for *-'ngi*, with an additional presupposition that the goal of e_{mot} corefers with the location of the speaker at an understood reference time (cf. Oshima (2007) for a similar analysis of English *come*). ENABLEMENT may be further inferred from (iv) and by competition with a same-subject clause-chaining construction, which allows for NARRATION but explicitly discourages causal relationships between events (AnderBois et al. 2023). Additionally, INTENTIONALITY of e_V is implicated from (ii), the involvement of the subject in e_V, and an extra assumption that the subject is knowledgeable about an ENABLEMENT relationship between the events.

VI. Conclusions: AM in A'ingae conveys superficially similar meanings to what Duff (2021, 2024) has shown for SLZ. However, we have argued that A'ingae entails only a spatiotemporal relation between e_{mot} and e_V, while Duff proposes that e_{mot} must be part of the agent of both events' plan to bring about e_V. We might then wonder what underlies this difference between the two languages. One likely culprit is syntactic differences between AM in the two languages. AM in SLZ is low in the syntax: it is closer to the verb root than overt aspect, it shows sensitivity to verb class (e.g. is incompatible with unaccusatives), and it is incompatible with passives. A'ingae AM, on the other hand, occurs outside of aspectual morphemes (Dąbkowski 2024) and is compatible with unaccusatives and passives. In the full paper, we explore the connection between these syntactic facts and the semantic differences here.

References

Altshuler, Daniel (2016) *Events, States and Times: An Essay on Narrative Discourse in English*. De Gruyter, first ed.

AnderBois, Scott, Daniel Altshuler, & Wilson D. L. Silva (2023) The Forms and Functions of Switch Reference in A'ingae. *Languages* **8**(2), URL `https://www.mdpi.com/2226-471X/8/2/137`.

Duff, John (2021) A Causal Decomposition for Associated Motion Events in Santiago Laxopa Zapotec. In *West Coast Conference on Formal Linguistics*.

Duff, John (2024) The structure of events and arguments in associated motion. In *Workshop on Structure and Constituency in the Languages of the Americas*, 43–57.

Dąbkowski, Maksymilian (2024) Two grammars of A'ingae glottalization: A case for Cophonologies by Phase. *Natural Language & Linguistic Theory* **42**(2): 437–491.

Guillaume, Antoine & Harold Koch (2021) Introduction: Associated Motion as a grammatical category in linguistic typology. In *Associated Motion*, Antoine Guillaume & Harold Koch, eds., Associated motion, De Gruyter Mouton, 3–30, URL `https://shs.hal.science/halshs-02917416`.

Haviland, John (1993) The syntax of Tzotzil auxiliaries and directionals: the grammaticalization of motion. In *Berkeley Linguistics Society*, vol. 19, 35–49.

Oshima, David Y. (2007) Motion Deixis, Indexicality, and Presupposition. *Proceedings of SALT 16* : 172–189.

Pakendorf, Brigitte & Natalia Stoynova (2021) Associated motion in Tungusic languages: a case of mixed argument structure. In *Associated Motion*, Harold Koch Antoine Guillaume, ed., de Gruyter Mouton, 855–897, URL `https://hal.univ-lyon2.fr/hal-03167436`.

Truswell, Robert (2011) *Events, phrases, and questions*. Oxford University Press.

Zavala Maldonado, Roberto (2000) Olutec motion verbs: Grammaticalization under Mayan contact. In *Berkeley Linguistics Society*, vol. 26, 139–151.