

The decomposition of voice morphology across Austronesian languages

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1. Overview: In many theories of Austronesian—in particular symmetric—voice systems, analyses tend to focus on the syntactic behavior of pivots, while voice morphology is mostly described as a set of morphemes in complementary distribution whose locus of spell-out is delegated to a single syntactic head (Rackowski 2002; Chen 2017; Erlewine et al. 2017, a.o.). This talk takes an often overlooked morphological approach to voice systems in Austronesian languages, building off work on Malagasy (Guilfoyle et al. 1992; Paul 1999; Pearson 2005), to argue in support for the view that “voice morphology” should in fact be decomposed into multiple morphemes spread across distinct syntactic heads. Given a morphology-to-syntax mapping under the Mirror Principle (Baker 1985), this has consequences for the articulation of functional projections in the extended Voice domain (Travis 2010).

2. Data: While voice morphology is commonly presented as a series of up to four complementary morphemes—i.e. actor voice (AV), patient voice (PV), locative voice (LV), circumstantial voice (CV)—a closer examination reveals that 1) there are often additional morphemes that interact with and challenge the neat complementarity of such a system, and that 2) the voice morphemes themselves are often morphologically complex in meaningful ways.

One language where this is particularly clear is Malagasy (1) (adapted from Pearson 2005), which has a three way voice alternation. In addition to canonical voice—also called ‘topic’—morphemes AT, TT, and CT, there also exists a linking morpheme *-ny* that occurs in non-AT constructions, as well as morphemes sensitive to transitivity *i-/aN-* that occur in non-TT constructions. The examples in (2) illustrate a morpheme breakdown of the different voices.

- (1) a. actor topic (AT): *m-* b. theme topic (TT): *-Vn* c. circumstantial topic (CT): *-an*
 d. linking morpheme (LNK): *-ny* e. intransitive (INTR): *i-* f. transitive (TR): *aN-*
- (2) a. *m-aN-vono* ‘AT-TR-kill’ b. *vono-in-ny* ‘kill-TT-LNK’ c. *aN-vono-an-ny* ‘TR-kill-CT-LNK’

Similar evidence can also be found in other branches of the Austronesian family, focusing here on the contrast between the present indicative and imperative voice paradigms of Formosan languages such as Atayal (3), Bunun (4), and Puyuma (5) (based on data from NTU online corpus and CIP grammar series, simplified for exposition).

	AV	PV	LV	CV
(3) PRES	⟨m⟩	-un	-an	s-
IMP	∅	-i	-i	-an-i
	AV	PV	LV	CV
(4) PRES	ma-	-un	-an	is-
IMP	-a	-a-v	-a-v	-a-v
	AV	PV	LV	CV
(5) PRES	⟨em⟩	-aw	-ay	-an-ay
IMP	∅	-u	-i	-an-i

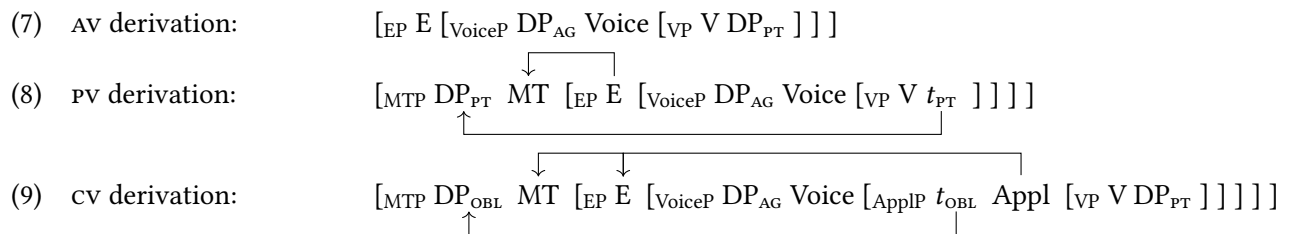
While the indicative paradigm alone might appear fairly complementary, factoring in the imperative paradigm reveals something a bit more compositional. First, notice that AV forms across these languages are morphologically reduced compared to their non-AV counterparts, whether null or containing a subset of morphemes present in the non-AV forms. Secondly, the CV forms in Atayal and Puyuma are clearly morphologically complex, with an extra morpheme on top of their PV/LV counterparts. Third, and importantly, the indicative and imperative non-AV forms in Puyuma seem to differ only in the presence of an additional *-a* in the former paradigm, while this vowel *-a* is systematically absent in all AV forms.

3. Account: I propose a syntactic structure similar to that of Travis (1991, 2010) and Pearson (2005)—which was based on Tagalog and Malagasy—where voice morphology is split across multiple projections, and show that the structure neatly accounts for the Formosan data. A complete syntactic hierarchy is shown in (6), where M(iddle) T(opic) hosts PV and LV morphology (corresponds to Asp in referenced works), E(vent) hosts AV morphology and other morphemes in complementary distribution, Voice hosts morphemes related to transitivity, and Appl hosts CV morphology. A fundamental assumption here is the Mirror Principle (Baker 1985), wherein morpheme order maps directly to syntactic structure, and multiple morphemes thus indicate the existence of multiple projections.

- (6) C > T > Asp_{PV} > MT > E > Voice > Asp_{RED} > Appl > v > √ROOT

I address issues that arise in such an analysis, including: 1) what the nature of these projections are and whether there is cross-linguistic evidence for them beyond Austronesian, and 2) what mechanism creates the appearance of complementary distribution. The central proposal is that “voice morphology” is often the spell-out of bundles of features on complex heads, and that MT and Appl are not always projected across all voice constructions (7-9).

Following the literature, I assume that Austronesian pivots are topics (Pearson 2005; Chen 2017; a.o.), due to their ability to create new binding relations (Lasnik & Stowell 1991; Chierchia 2024) despite not displaying canonical subjecthood properties. I propose that the landing site of pivot movement is hosted by the MT projection, which has precedence in other information structural movements to the middle field (LaCerdea 2020), such as Germanic object shift and local scrambling in Hindi (NOTE: evidence for movement to the middle field—as opposed to the left periphery—is found in word and affix order; Wu 2024). Crucially, MT is only projected in non-AV constructions, when it creates an interpretational difference by extracting an internal argument over the agent, which captures the recurring binary between AV and non-AV forms such as with Malagasy *m-* vs. *-ny* and Formosan imperatives. I adopt as a functional head for event closure the E projection, used cross-linguistically in infinitival marking such as in English and French (Travis 2010). In contrast to MT, E is always projected, and in its default form spells-out AV morphology unless features in its environment—e.g. [MT] or [IMP]—trigger allomorphy. Finally, I assume the presence of an Appl projection (Pylkkänen 2008) akin to those found in Bantu languages. Crucially, Appl is only projected in LV and CV constructions, making them a special subcase of non-AV constructions (NOTE: evidence for such a dative alternation is discussed in Rackowski 2002; see also Chang 2009 for voice morphology on adverbs).



The availability of MT and Appl projections, combined with contextual allomorphy and the creation of portmanteaus through head movement (see arrows above), thus derives the apparent complementary distribution of voice morphology. The proposed vocabulary items are shown below for Malagasy (10), Puyuma (11), and Bunun (12).

- (10) a. $E \Leftrightarrow m-$ or $E \Leftrightarrow -ny / _ [MT]$ b. $MT \Leftrightarrow -Vn$ c. $Appl+MT \Leftrightarrow -an$
- (11) $E \Leftrightarrow \langle em \rangle$ $MT \Leftrightarrow -u/-i$ (12) $E \Leftrightarrow ma-$ $E \Leftrightarrow -a / _ [IMP]$
 $E \Leftrightarrow -a / _ [MT]$ $Appl \Leftrightarrow -an$ $MT+E \Leftrightarrow -un/-an$ $MT \Leftrightarrow -v / _ [IMP]$
 $E \Leftrightarrow \emptyset / _ [IMP]$ $MT+E+Appl \Leftrightarrow is-$ $Appl \Leftrightarrow \emptyset / _ [IMP]$

In Malagasy and Puyuma, contextual sensitivity of E to the presence of MT results in the disappearance of AV *m-* and $\langle em \rangle$ in non-AV voices, although this is replaced by *-ny* and *-a* as evidence that E is still syntactically present. In Atayal and Bunun, different voices spell-out increasingly complex heads, where AV is E, PV is MT+E, and CV is MT+E+Appl, with a consequence that these portmanteaus obscure different levels of functional complexity. The imperative paradigm in Formosan languages, however, is where spell-out seems to become more compositional and we see different heads functioning independently. First, the spell-out of E and MT separately, such as Atayal \emptyset vs. *-i* and Bunun *-a* vs. *-v*, explains the reduced nature of AV forms since they lack the MT projection altogether. Second, the morphologically complex CV forms in Atayal and Puyuma can straightforwardly be captured by the spell-out of Appl *-an* as distinct from that of MT *-i*, where both can co-occur. Third, Puyuma provides especially clear evidence for the decomposition of voice morphology, where the CV.PRES form *-an-a-i* illustrates the overt spell-out of all three heads in the predicted order Appl *-an* < E *-a* < MT *-i*. Altogether, we can understand voice distinctions as varied bundles of features rather than discrete entities, and the articulation of these projections is able to capture complex morphological relationships in voice paradigms that are otherwise hard to account for.

4. Discussion: Overall, the syntactic hierarchy proposed in (6) furthers our understanding of the extended Voice domain and middle field syntax, and provides what is perhaps a compromise between argument structural and information structural approaches to Austronesian voice. To be expanded in the talk, this analysis also has potential extensions to the relationship between the voice morphology, tense/aspect, and clause size in complementation.

5. Selected references: Baker (1985). The Mirror Principle and morphosyntactic explanation. Chen (2017). A re-examination of the Philippine-type voice system... Pearson (2005). The Malagasy subject/topic as an A'-element. Travis (2010). Inner aspect. Wu (2024). A unified account of multiple homophony of *m-* in Seediq.