

The AV-only Restriction and Locality in Formosan Languages*

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ABSTRACT

Under a generative framework, this paper investigates the properties of the AV-only restriction on complementation and how it comes about across many Formosan languages. It is found that the AV-only complements occur as a nonfinite defective *v*P without any formal feature and that they are tenseless and subjectless—temporal markers must attach to the matrix verb; the embedded object, if any, is required to move to the matrix subject position to get case. The AV-only restriction is attested not only in restructuring constructions but also in non-restructuring ones. In both types, the matrix verbs are highly restricted: in the first type, the matrix verb is restricted to a restructuring verb and in the second type, the matrix verb is limited to a verb that projects an external argument. In restructuring contexts, the matrix external argument, if there is one, is inert and creates no intervention effects for the shifted embedded object; in non-restructuring contexts, the matrix external argument blocks the raising of the embedded object, thereby preventing the embedded verb from occurring in the non-AV transitive form. The AV-only restriction is due to multiple factors, most important of which is a locality condition.

Key words: the AV-only restriction, Formosan language, complement clause, restructuring, external argument, locality

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1. Introduction

The goal of this paper is two-folded. On the one hand, it aims to give an explicit and precise description of a typologically rare morphological restriction on verbal complements across various constructions in Austronesian languages spoken in Taiwan, also known as Formosan languages. On the other hand, it goes one step further and attempts to account for the restriction in a generative framework. Both endeavors are novel and hopefully can better our understanding of Formosan syntax.

It is not uncommon that complements subordinate to a subset of verbs are subject to a certain morphological restriction across the world's languages. This is particularly obvious in languages that are morphologically rich. Take French for example. French has been known for its complex verbal conjugation. A verb can entertain a wide variety of morphological variation. However, verbs subordinate to causative verbs are morphologically restricted—they can only occur in the infinitive form, as in (1).

- (1) French (Achard 1998: 99)
Marie fait danser Paul. (Infinitive)
 'Mary makes Paul dance.'

Likewise, verbs subordinate to desirative verbs typically appear in the subjunctive form, not the regular indicative form, despite being led by an overt complementizer. Compare:

- (2) French (Achard 1998: 246)
 a. *Je veux qu'il gagne au Loto.* (Subjunctive)
 'I want him to win the Loto.'
 b. **Je veux qu'il gagnera au Loto.* (Indicative)

A similar restriction is also found in English, though not in that obvious manner. In English, verbs that occur in the complement of the causative verb *let* can only take the root form, as in (3), while complement verbs to the causative verb *cause* must pattern

with the infinitive marker *to*, as in (4).

- (3) *I let her go/*to go/*went.*
 (4) *The strong earthquake caused the building to collapse/*collapse/*collapsed.*

Still, the way of morphological restriction on complement verbs across many Formosan languages is typologically unusual. Formosan languages are widely noted for their rich Philippine-type voice system—a verb can take up to four types of voice conjugation with respect to its grammatical operation, as will be briefly introduced in section 2.1 below. Nevertheless, a verb can occur only in the Actor voice (AV) form if embedded to certain types of verbs in many Formosan languages. As in (5a), the verb *qaynep* ‘sleep’ must appear in the AV form if embedded to the object-control verb *pawRat* ‘force’ in Kavalan; the sentence will be ruled out if *qaynep* occurs in the PV form, as in (5b).

- (5) Kavalan (Based on Chang & Tsai 2001: 3-4)¹
- | | | | | |
|----|--------------------------------|-----------|--------------|---------------------------|
| a. | <i>pawRat=iku</i> | <i>tu</i> | <i>sunis</i> | <u><i>pa-qaynep</i></u> . |
| | force.AV=1S.ABS | OBL | child | CAUS-sleep.AV |
| | ‘I forced the child to sleep.’ | | | |
| b. | * <i>pawRat=iku</i> | <i>tu</i> | <i>sunis</i> | <i>pa-qaynep-an</i> . |
| | force=1S.ABS | OBL | child | CAUS-sleep-PV |

Unlike familiar languages such as French and English, Formosan complement verbs in question are not restricted in terms of infinitive, subjunctive, or the like; instead, they are restricted with regard to their “voice” alternation.² Note, in contrast, that in English,

¹ Except for the following amendments, I follow the Leipzig’s Glossing Rules in labeling the glosses: AV=Actor voice, BA=Benefactive applicative, COS=change of state, IA=Instrumental applicative, LA=Locative applicative, PV=Patient voice.

² As will become evident shortly, the “voice” system in Formosan languages is not equivalent to that in English. In spite of this, the former and the latter share an important function, viz., to advance one of the arguments associated with the main verb to a syntactically prominent position in the sentence via a verbal marking. This shared function renders the subsequent cross-linguistic comparison a conceptual basis. In other words, the two systems under discussion are comparable, albeit slightly different. This note is intended for addressing an anonymous reviewer’s concern over comparison fallacy.

complement verbs in the infinitive are not voice-restricted. As in (6), passive voice is acceptable in the infinitive complements as well.

- (6) a. *The majority of respondents expected and agreed to be examined by a trainee but they were reluctant to be examined by the students.*
(National Institute of Health)
- b. *The area began to be attacked by artillery and airplanes.* (WWW)

In this respect, Formosan languages are unique. It is important to characterize the nature of the AV-only restriction and figure out why it is so.

The paper is organized as follows. Section 2 is comprised of two subsections. Section 2.1 gives a brief introduction to the voice system in Formosan languages, which provides background knowledge for the issues under investigation. Section 2.2 reviews the previous literature on the AV-only restriction and identifies the relevant research questions. Section 3 makes observations and generalizations on the restriction and moves towards a solution. Section 4 concludes the paper by exploring the typological and theoretical implications of this study and raising some questions for future research.

2. Background Information

2.1 The Philippine-type Voice System

Since the AV-only restriction on complement verbs centers around grammatical voice, a brief introduction to how grammatical voice works in Formosan languages is in order. In Formosan languages, a verb is typically marked with the Philippine-type voice, traditionally labeled as focus marking. The verbal voice marking indicates a syntactic operation where an argument associated with the verb is advanced to the most prominent position of the sentence. Scholars dispute over how to call the advanced prominent argument and whether it ends up in an A- or A'- position. Following the traditional practice, I label the advanced prominent argument as subject throughout the paper, though I depart from the traditional view and consider it to stop over in the specifier of

- c. *i-si* *si-i* *ta* *amo* *ta* *emi* 'o *pangka*.
 NAV.RL-3SG.ERG put-LV ERG father OBL wine ABS table
 'Father put the wine on the table.'
- d. *i-si* *si-eni* *ta* *amo* *ta* *emi* (na) a'o.
 NAV.RL-3SG.ERG put-BV ERG father OBL wine ABS 1SG.ABS
 'Father put the wine for me.'

Importantly, in a transitive NAV construction, the direct object cannot remain in its base position; instead, it is required to shift to the subject position and then to the lower topic position. The obligatory object shift is due to the ergative propensity of Formosan languages. Please refer to Aldridge (2004, 2008a, 2008b) and Chang (2011, 2015) for a more comprehensive discussion of this issue.

2.2 Literature Review

The AV-only restriction has been found on a few constructions across many Formosan languages in the literature, though no explanation for it has been put forward thus far. Huang (1995, 1997) observes that the AV-only restriction holds of serial verb constructions in Mayrinax Atayal, as in (8).

(8) Mayrinax Atayal (Based on Huang 1995: 196, 1997)

- a. *ma-'usa'* 'i' *k<um>aluap* 'i' *yumin*.
 AV.FUT-go LNK hunt<AV> NOM PN
 'Yumin will go hunting.'
- b. *'a-'usal-an* 'i' *ma-bainay* *ni'* *yaya'* *ku'* *bunga'*.
 RED-go-LV LNK AV-buy GEN father NOM sweet.potato
 'Father will go to buy the sweet potatoes.'

On complementation, Tang (1999) points out that the AV-only restriction is attested in purposive complements in Paiwan. As in (9), the embedded verb *demukuL* 'hit' remains in the AV form, regardless of the voice alternations of the matrix verb, *maLap* (AV) in (9a) vs. *'inaLap* (PV) in (9b).

(9) Paiwan (Based on Tang 1999: 562)

- a. *m-aLap ti kai tua kasiv a dukuL tai kui.*
 AV-take ABS PN OBL stick LNK hit<AV> OBL PN
 ‘Kai takes a stick to hit Kui.’
- b. ‘<in>aLap ni kai a kasiv a dukuL tai kui.
 take<PV> ERG PN ABS stick LNK hit<AV> OBL PN
 ‘Kai took the stick to hit Kui.’

In the investigation of obligatory control constructions in Kavalan, Chang & Tsai (2001) note that the control complement verb is subject to the AV-only restriction, as already indicated in (5) above. Moreover, Chang (2006, 2010) makes the observation that the verbs embedded under certain types of adverbial verbs also manifest the AV-only restriction, as in (10).

(10) Kavalan (Based on Chang 2006: 46)

- a. *paqanas=iku tayta tu sulal.*
 slowly(AV)=1S.ABS see<AV> OBL book
 ‘I read a book slowly.’
- b. *qanas-an-ku tayta ya sulal.*
 slowly-PV-1S.ERG see<AV> ABS book
 ‘I read the book slowly.’

Nonetheless, it remains mysterious as to how the AV-only restriction comes about.

One may attribute the AV-only restriction to restructuring, contending that the AV-only restriction is attested only in restructuring complements. The restructuring analysis is reasonable, since restructuring complement verbs are widely known to be in the root form (Rizzi 1978; Wurmbrand 2001; among many others). Wurmbrand (2001) argues quite convincingly that restructuring complements occur as VPs in German and Italian. Following this line of thought, Chen (2012) takes complements embedded under restructuring verbs as VPs in Mayrinax Atayal. As in (11a), the aspectual verb *mnaqaru* ‘finish’ is in the AV form and its complement verb *tumaluk* ‘cook’ is eligible for assigning accusative case to its object. In contrast, as in (11b), the aspectual verb triggers

restructuring in its PV form *naqaruun* and the complement verb loses its structural case assigning capacity. It follows that the object must raise to the matrix clause to obtain case, leading to a syntactic operation comparable to long passive in German. In this respect, the Mayrinax restructuring complement can be taken as a bare VP without any structural case feature.

(11) Mayrinax Atayal (Chen 2012: 6)

a. *m-naqaru* 'i' *t<um>aluk* *cu'* *cai'* *ku'* *'ulaqi'*.
 AV-finish LNK <AV>cook ACC taro NOM child
 'The child finished cooking the taros.'

b. *naqaru-un* *nku'* *'ulaqi'* 'i' *t<um>aluk* *ku'* *cai'*.
 finish-PV GEN child LNK <AV>cook NOM taro
 'The child finished cooking the taros.' (Lit. The taros were finished to cook by the child.)

A similar connection between restructuring and the AV-only restriction is also found in Paiwan, as noted by Wu & Chang (2015). Compare:

(12) Paiwan (Wu & Chang 2015: 2-3)

a. *vaik-en* *nimadju* *a* *qaljup* *a* *vavuy*.
 go-PV 3S.ERG LNK hunt<AV> ABS wild.pig
 'He went to hunt the wild pig.'

b. *palayulayuw-in* *ni* *kapi* *mangtjez* *a* *seqasa* *azua* *kasiw*.
 often-PV ERG PN come.AV LNK cut<AV> ABS those tree
 'Kapi came here to cut those trees often.'

While restructuring may observe the AV-only restriction across many Formosan languages, it is important to note that the AV-only restriction is also attested in non-restructuring constructions. In Kavalan, certain types of verbs that do not involve restructuring also display the AV-only effect. The following constructions led by manner adverbial verbs are illustrative in this regard: As in (13a), there is no long-distance DP movement attested when the adverbial verb *paqanas* 'slowly' is marked with the AV

form and thus no restructuring is observed here, given that the theme *sulal* ‘book’ of the activity verb remains as an oblique argument in the embedded clause and that there is no syntactic operation comparable to long passive taking place. Note, however, that the embedded verb *temayta* ‘see’ is required to occur in its AV form—the sentence will be ruled out if it is in the PV form, as in (13b).

(13) Kavalan (Chang 2006: 46)

- a. *paqanas=iku* *tayta* *tu* *sulal*.
 slowly(AV)=1S.ABS see<AV> OBL book
 ‘I read a book slowly.’
- b. **paqanas=iku* *tayta-an* *ya* *sulal*.
 slowly(AV)=1S.ABS see-PV ABS book

Likewise, in Mayrinax, non-restructuring constructions involving motion verbs require that their complement verbs occur only in the AV form, giving rise to an AV-marked verb followed by another, as in (14).

(14) Mayrinax Atayal (Based on Wu et al. 2014: 5)

- a. *ma-’usa=ci’* *cubu’* *cu’* *bauwak*.
 AV.FUT-go=1S.ABS.LNK shoot<AV> OBL wild.pig
 ‘I will go to shoot wild pigs.’
- b. **ma-’usa=ci’* *si-cbu’* *ku’* *bauwak*.
 AV.FUT-go=1S.ABS.LNK IA-shoot ABS wild.pig

It becomes evident that the AV-only restriction may be independent of restructuring. Another piece of evidence for the independence comes from Tsou. As noted in Chang (2014), restructuring induces voice/transitivity concord rather than the usual AV-only restriction in Tsou. For example:

(15) Tsou (Chang 2014: 6)

a. *i-ta* *ahoz-a* *an-a* 'o *yoskx*.
 NAV.RL-3S begin-PV eat-PV ABS fish

'He begins to eat the fish.'

b. **i-ta* *ahoz-a* *bonx* *to* *yoskx*.
 NAV.RL-3S begin-PV eat.AV OBL fish

Intended for 'He begins to eat the fish.'

(16) Tsou (Based on Chang 2009: 442)

a. *i-ta* *ahav-a* *eobak-a* 'e *oko*.
 NAV.RL-3S.ERG suddenly-PV beat-PV ABS child

'He suddenly beat the child.'

b. **i-ta* *ahav-a* *eobako* *to* *oko*.
 NAV.RL-3S.ERG suddenly-PV beat.AV OBL child

On the other hand, the AV-only restriction holds of non-restructuring constructions in the language, contra many researchers' expectation. These non-restructuring constructions, which Lin (2015) identifies as her type II serial verb constructions (SVCs) as opposed to her type I SVCs such as (15)-(16) above, include those led by (i) verbs of using/bringing (17a), and (ii) verbs of staying (17c). Notice that the sentence-final subjects *poyave* 'knife' in (17a) and *coca* 'yard' in (17c) are not originated in the embedded clause—this means that they do not undergo long distance DP movement akin to long passive and that these constructions do not manifest restructuring at all.

(17) Tsou (Chang 2014: 23; Lin 2015)

a. *i-ta* *tith-a* *m-apaso* *ta* *fou* 'o *poyave*.
 NAV.RL-3S.ERG use-PV AV-cut OBL meat ABS knife

'He used the knife to cut meat.'

b. **i-ta* *tith-a* *papas-a* *ta* *fou* 'o *poyave*.
 NAV.RL-3S.ERG use-PV cut-PV OBL meat ABS knife

c. *i-ta* *yon-i* *m-apaso* *ta* *fou* 'o *coca*.
 NAV.RL-3S.ERG stay-LV AV-cut OBL meat ABS yard

'He stayed in the yard cutting meat.'

d. **i-ta* *yon-i* *papas-a* *ta* *fou* 'o *coca*.
 NAV.RL-3S.ERG stay-LV cut-PV OBL meat ABS yard

It is thus concluded that despite a correlation, the AV-only restriction is not fully reducible to restructuring. An alternative explanation is needed.

3. A Locality-based Analysis

3.1 Observations: A Recap

We have shown in the preceding sections that the AV-only restriction is found in two types of constructions with respect to the voice-marking of the matrix verb, namely, Type I constructions where the matrix verb occurs in non-AV form and Type II constructions where the matrix verb is specified for the AV. Let us take a closer look at these two types one by one.

Type I consists of two subtypes. In many Formosan languages other than Tsou, Type I refers to restructuring constructions where the matrix verbs are typical restructuring verbs such as aspectual verbs (e.g., *begin, finish*), dynamic modal verbs (e.g., *be able to*), desiderative verbs (e.g., *want*), and motion verbs (e.g., *go*), or event-related adverbial verbs involving the manner/frequency of the action. In Tsou, however, Type I are of non-restructuring constructions where the matrix verbs denote events of bringing, using or staying. Still, it should be noted that Type I share one common feature in Formosan languages, viz., their matrix verbs are marked for non-AV.

Type II subsumes constructions led by certain types of verbs, including (i) aspectual verbs, (ii) dynamic modal verbs, (iii) motion verbs, and (iv) manner adverbial verbs. In Type II, the matrix verb is consistently marked with AV.

Table 1 summarizes the above observations.

Table 1: Classification of constructions with the AV-only restriction

	Construction type	Matrix voice type	Matrix verb type
Type I	Restructuring	Non-AV	Restructuring verbs
	Non-restructuring (Tsou)	Non-AV	Verbs of using, bringing, or staying
Type II	Non-restructuring	AV	Aspectual, dynamic modal, motion, or manner adverbial verbs

In terms of the matrix verb type, the key distinction between Type I and Type II lies in adverbial verbs of frequency. Specifically, an adverbial verb of frequency does not induce the AV-only restriction unless in the Non-AV form. We shall return to this issue in section 3.2.2.

3.2 Towards a Solution

The variability on the AV-only restriction suggests that it is not due to one single factor. To figure out the multiple factors behind it, let us examine Type I and Type II in turn and then see whether there may be an unifying account for it.

3.2.1 Type I

For restructuring constructions in Type I, the motivation for the AV-only restriction is more straightforward. Let us illustrate it by the example in (12a), repeated below as (18):

(18) Paiwan (Wu & Chang 2015: 2-3)

vaik-en nimadju a qaljup a vavuy.
 go-PV 3S.ERG LNK hunt<INTR> ABS wild.pig
 ‘He went to hunt the wild pig.’

In examples like this, the matrix verb does not s-select a patient/theme, despite bearing a transitive PV marker. Here, the transitive PV marker is largely comparable to the passive marker occurring on the higher verb in a German restructuring construction which Wurmbrand (2001) labels as a long passive. Compare:

(19) German (Wurmbrand 2001: 19)

dass der Traktor zu reparieren versucht wurde
 that the tractor-NOM to repair tried was.PASS
 ‘that they tried to repair the tractor’

In both cases, the object of the embedded verb moves to the specifier of the matrix TP/MoodP for receiving the structural case or satisfying the EPP feature on T/Mood, depending on the syntactic theory one adopts. The long-distance DP movement does not induce any locality effect. For long passives such as (19), the matrix external argument has been demoted to an oblique and the restructuring complement VP does not merge any external argument at all—hence, there is no other DP argument in competition with the shifted object for the structural [Spec, TP] position. For long-distance object shifts such as (18), there is indeed a DP argument situated closer to the structural [Spec, MoodP] position than the embedded object, viz., the external argument of the matrix verb; however, the external argument has been inherently assigned ergative case, presumably by the matrix transitive v , and hence inert in the derivation. Accordingly, the embedded object moves into the structural [Spec, MoodP] position without inducing any intervention effect. The long-distance DP movement can be schematized as follows:

(20) Restructuring long-distance DP movement

$$[{}_{\text{TP/MoodP}} \text{O}_i [{}_{\text{T'/Mood}'} \text{T/Mood} [{}_{\text{VP}} \text{EA} [{}_{\text{v}'} v_{\text{RES}} [{}_{\text{VP}} \text{V} [{}_{\text{VP}} \text{V} t_i]]]]]]]$$

In many Formosan languages other than Tsou, a restructuring verb presumably takes a defective v P (with the external argument truncated) as its complement (Shi 2014; Chang 2014). This typological feature, along with the locality condition, bans the embedded verb from appearing in the non-AV form, thereby leading to the AV-only restriction.

Meanwhile, the AV-only restriction in Tsou is attributable to locality conditions and the well-formedness filters. Consider the non-restructuring examples in (17a, b), repeated below as (21).

(21) Tsou (Chang 2014: 23; Lin 2015)

- a. *i-ta* *tith-a* *m-apaso* *ta* *fou* 'o *poyave*.
 NAV.RL-3S.ERG use-PV AV-cut OBL meat ABS knife
 'He used the knife to cut meat.'
- b. **i-ta* *tith-a* *papas-a* *ta* *fou* 'o *poyave*.
 NAV.RL-3S.ERG use-PV cut-PV OBL meat ABS knife

The sentences in (21) are comprised of two 2-argument activity verbs *titha* 'use' and *mapaso/papasa* 'cut', each of which has its own patient argument. In (21a), where the embedded verb occurs in the AV form, the patient of the embedded verb, namely, *fou* 'meat' bears an inherent oblique case and remains in the embedded clause throughout the derivation—it will not compete for the structural [Spec, MoodP] with the patient of the matrix verb, viz., *poyave* 'knife'. It follows that the movement of *poyave* to the structural [Spec, MoodP] will not induce any intervention effect and hence the derivation is well-formed. In contrast, in (21b), where the embedded verb occurs in the non-AV form, the embedded patient is merged as a direct object and required to shift out of the embedded clause to the matrix [Spec, MoodP]. However, it is unable to move there, given that the position is already filled by the matrix patient, which is closer to the position. This leads to the violation of the well-formedness filters and thus the sentence is ruled out. It should be noted that the embedded patient cannot evade the locality condition by moving into an embedded [Spec, MoodP], as the embedded clause is nonfinite and lack of that position. In other words, the AV-only restriction in sentences like (21) is due to the locality conditions and well-formedness filters.

This should not be confused with the restructuring constructions in the language discussed above. In restructuring constructions such as (15)-(16), the matrix verb does not have its own patient/theme. Its transitive PV marker grammatically agrees with that of the embedded verb instead of introducing an independent direct object in its own right. Compare:

(22) Tsou (Chang 2014: 6, based on Chang 2009: 442)

- a. *i-ta* *ahoz-a* *an-a* 'o *yoskx*.
 NAV.RL-3S begin-PV eat-PV ABS fish
 'He begins to eat the fish.'
- b. *i-ta* *ahav-a* *eobak-a* 'e *oko*.
 NAV.RL-3S.ERG suddenly-PV beat-PV ABS child
 'He suddenly beat the child.'

In the absence of any closer intervening argument, the embedded object has no problem in moving upwards to the matrix clause and getting licensed over there.

3.2.2 Type II

In Type II, both the matrix verb and the embedded verb are inflected for AV. The matrix verbs are lexically restricted in this type, as mentioned above. They include (i) aspectual verbs, (ii) dynamic modal verbs, (iii) motion verbs, and (iv) manner adverbial verbs. These verbs have two things in common—they take an agent/experiencer as their external argument and a *vP* as their complement. The first shared property is very crucial here. If the embedded verb is inflected for a grammatical voice other than the AV, the sentence will be ruled out. Consider the examples in (14) again, repeated below as (23).

(23) Mayrinax Atayal (Based on Wu et al. 2014: 5)

- a. *ma-'usa=ci'* *cubu'* *cu'* *bauwak*.
 AV.FUT-go=1S.ABS.LNK shoot<AV> OBL wild.pig
 'I will go to shoot wild pigs.'
- b. **ma-'usa=ci'* *si-cbu'* *ku'* *bauwak*.
 AV.FUT-go=1S.ABS.LNK IA-shoot ABS wild.pig

As in (23a), it is the external argument of the matrix AV verb that moves into the [Spec, MoodP] position, whereas the patient/theme of the embedded AV verb remains as an oblique in its base position. There is no long-distance object shift and thus no restructuring taking place here; its syntactic derivation is very much straightforward and legitimate, as

schematized in (24).

(24) Syntactic derivation in Type II

$[_{\text{MoodP}} \text{EA}_i [_{\text{Mood}'} \text{Mood} [_{\text{vP}} \text{t}_i [_{\text{v}'} \nu [_{\text{VP}} \text{V} [_{\text{vP}} [_{\text{VP}} \text{V OBL}]]]]]]]]]]]$

In (23b), the matrix verb remains in the AV, but the embedded verb turns into an applicative verb. Given its root as a two-argument verb, the applicativized embedded verb must pattern with a direct object. In ergative languages such as the Formosan languages under discussion, this means that the direct object is required to shift to the prominent [Spec, MoodP] position (Chang 2011, 2015). However, the object shift at issue is in violation of the locality condition and thus ill-formed, since the shifted object crosses over an intervening argument, namely, the matrix external argument, which is closer and eligible for moving into the [Spec, MoodP] position, as roughly represented below.

(25) Locality effect in Type II

$*[_{\text{MoodP}} \text{O}_i [_{\text{Mood}'} \text{Mood} [_{\text{vP}} \text{EA} [_{\text{v}'} \nu [_{\text{VP}} \text{V} [_{\text{vP}} [_{\text{vP}} \text{t}_i [\text{EA} [_{\text{v}'} \nu [_{\text{VP}} \text{V t}_i]]]]]]]]]]]]]]]$

The present analysis predicts that matrix verbs that take vP as their complement but do not take an external argument will not observe the AV-only restriction. This prediction is borne out correctly. Quantificational frequency verbs are a case in point. We have shown that manner adverbial verbs behave on a par with aspectual/motion/dynamic modal verbs with respect to the AV-only restriction across many Formosan languages. For expository purposes, let us repeat the relevant example in (13) as (26):

(26) Kavalan (Chang 2006: 46)

a.	<i>paqanas=iku</i>	<i>tayta</i>	<i>tu</i>	<i>sulal.</i>
	slowly(AV)=1S.ABS	see<AV>	OBL	book
	'I read a book slowly.'			
b.	* <i>paqanas=iku</i>	<i>tayta-an</i>	<i>ya</i>	<i>sulal.</i>
	slowly(AV)=1S.ABS	see-PV	ABS	book

In contrast, quantificational frequency verbs that also take *vP* as their complement do not observe the AV-only restriction in their AV forms. Compare:

(27) Kavalan (Chang 2006: 46)

- a. *pataz=ti=iku* *supas tu qRitun.*
 often.AV=COS=1S.ABS buff<AV> OBL car
 ‘I buffed a car often.’
- b. *pataz* *supas-an-ku=ti ya qRitun.*
 often.AV buff-PV-1S.ERG=COS ABS car
 ‘I buffed my car often.’

In the present analysis, the key difference between manner adverbial verbs and their quantificational frequency counterparts lies in the presence/absence of an external argument—manner adverbial verbs take an external argument, but their quantificational frequency counterparts do not. Note that manner adverbials are widely known to be associated with agency and thus expected to be tied up with an agent argument. A clear indication of this semantic property is that a manner adverbial root can take an agent in its own right. For example:

(28) *John has successfully slowed down his car without brakes.* (WWW)

This is even more obvious in many Formosan languages where a manner adverbial expression occurs as a verb. As noted in Chang (2006), a manner adverbial verb may take an agent as well as a patient on its own. Compare:

(29) Kavalan (Based on Chang 2006: 46)

- paqanas-i-ka ya qRitun!*
 slow-TR-IMP ABS car
 ‘Slow the car down!’

It is thus plausible that a manner adverbial verb merges with an agent in its specifier. In

the proposed analysis, the external agent argument will block the long distance object shift when a manner adverbial verb inflected for the AV embeds a lexical verb inflected for the non-AV, as captured in (25).

However, this is not the case for quantificational frequency adverbials. A quantificational frequency adverbial is concerned with the temporal aspect of an event rather than its agency and thus expected not to take an agent as its external argument like a manner adverbial. Accordingly, unlike a manner adverbial root in (28), a frequency adverbial root is less likely to occur as a lexical verb in English.⁴ The same observation carries over to many Formosan languages, in spite of their pervasive realizations of adverbials proper as verbs. As noted in Chang (2006), unlike a manner adverbial verb, a quantificational frequency verb cannot stand alone and take arguments on its own. Compare (30) to (29).

(30) Kavalan (Based on Chang 2006: 49)

**pataz-i-ka ya qRitun!*
often-PV-IMP ABS car

This helps explain why the long distance object shift is legitimate and why the AV-only restriction is not observed with the quantificational frequency adverbial verb in (27b). In the absence of an intervening agent, the long object shift will not induce any locality effect and is therefore grammatical. The syntactic derivation of (27b) can be schematized accordingly as follows:

(31) Long object shift with quantificational frequency verbs

[_{MoodP} O_i [_{Mood'} Mood [_{vP} [_{v'} v [_{vP} t_i [_{EA} [_{v'} v [_{VP} V t_i]]]]]]]]]]

As usual, the embedded external argument under discussion is not a problem for the long distance object shift, as it has been inherently marked with ergative case and inactive for movement.

⁴ As noted by an anonymous reviewer, a notable exception to this is concerned with the verbal use of the frequency expression *frequent*, as in *She frequents the market quarter of Paris*.

Besides, the locality-based account can also account for complex structures that look like tough constructions in many Formosan languages. As noted in Wu (2013), a tough-like construction takes an AV matrix verb followed by a non-AV embedded verb, evading the AV-only restriction in Mayrinax Atayal. For example:

(32) Mayrinax Atayal (Wu 2013: 174)

a. *m-nakux* 'i' *putu'-un* *ku'* *kahuniq*.

AV-easy LNK cut-PV NOM tree

'The tree cuts easily.'

b. *'aqih* 'i' *si-caqis* *cu'* *situing* *ku'* *ragum* *ka'* *hani*.

bad.AV LNK IA-sew OBL clothes NOM needle LNK this

'This needle is hard to use to sew clothes.'

In (32a-b), the patient argument *kahuniq* 'tree' and the instrument argument *ragum* 'needle' which look like moving from the embedded clauses turn out to be base-generated in the matrix clauses, with a co-referential operator in the embedded clauses—what really shifts is the covert operator in the embedded clause; *kahuniq* and *ragum* come from the external argument position of the tough predicates, as schematized as follows:

(33) Operator movement in tough-like constructions

$[_{\text{MoodP}} \text{XP}_i \dots [\dots [_{\text{VP}} \text{V}]_{\text{CP}} \text{OP}_i [\dots [_{\text{VP}} \text{t}_i [_{\text{VP}} \text{EA} [_{\text{v}'} \nu [_{\text{VP}} \text{V} \text{t}_i]]]]]]]]]$

The operator movement does not violate the locality condition, given that the embedded external argument is inactive and thus ineligible for movement. By doing so, the tough-like constructions evade the AV-only restriction.

It should be clear now that complements which display the AV-only effect are short of a grammatical subject. It is also noteworthy that they are "tenseless" in the sense that they are lack of any sentential temporal marking. Take Kavalan for example: As in (34), the future enclitic =*pa* attaches to the matrix adverbial verb; it cannot occur on the embedded lexical verb.

(34) Kavalan (Chang 2006: 46)

- a. *paqanas-an-ku=pa* *pasaqay* *ya* *qRitun*.
 slowly-TR-IS.ERG=FUT drive.INTR ABS car
 ‘I will drive the car slowly.’
- b. **paqanas-an-ku* *pasaqay=pa* *ya* *qRitun*.
 slowly-TR-1S.ERG drive.INTR=FUT ABS car

This accords with our analysis of the complements with the AV-only restriction as a nonfinite defective *v*P. As a nonfinite defective *v*P, they are expected to be unable to license a grammatical subject of any sort. On the other hand, this implicates that a finite complement will be free from the AV-only restriction. Indeed, this is the case, as illustrated below.

(35) Kavalan (Chang 2006: 51)

- a. *pasi* *m-etung* *tu* *babuy*.
 possible INTR-kill OBL pig
 ‘It is possible that he killed a pig.’
- b. *pasi* *'etung-an-na=pa* *ya* *babuy*.
 possible kill-TR-3S.ERG=FUT ABS pig
 ‘It is possible that he will kill the pig.’

(36) Mayrinax Atayal (Wu 2013: 95)

- ma- 'icug=cu* *'i'* *ta-tuting-un=cu* *ni'* *watan*.
 AV-afraid=1S.NOM LNK RED-beat-PV=1S.NOM GEN PN
 ‘I am afraid that Watan will beat me.’

It becomes clearer now where the AV-only restriction holds and where it does not and, mostly importantly, why it is so.

4. Concluding Remarks

This paper has demonstrated that the AV-only restriction is not only attested in restructuring constructions but also in non-restructuring constructions across many Formosan languages. It is found that complements with the AV-only effect occur as a nonfinite defective vP . In restructuring constructions that observe the AV-only restriction, the matrix verb is consistently inflected for the non-AV and the embedded object is required to move to the matrix structural case position, yielding a long-distance object shift. In non-restructuring constructions that abide by the AV-only restriction, both the matrix and the embedded verbs are inflected for the AV and there is no object shift involved—it is invariantly the matrix external argument that moves into the matrix structural case position. In Tsou, however, the situation is a little bit different—the matrix verbs must occur in the non-AV. Still, either in Tsou or other Formosan languages, the non-restructuring constructions with the AV-only effect are lexically restricted and required to take a matrix verb that projects an external agent/experiencer argument. The matrix external argument will block the raising of the embedded object, given that it is closer to the matrix structural case position, thereby preventing the embedded verb from occurring in the non-AV. All in all, the AV-only restriction is due to a combination of factors of different sorts, including locality conditions, well-formedness filters, and selectional restrictions.

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臺灣南島語言的主焦標記限制與局部性條件

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摘 要

本文研究臺灣南島語言補語句動詞主焦標記限制以及其形成的機制。研究發現，遵守該限制之補語句為一非限定、不完整之輕動詞詞組。主焦標記限制不僅出現在結構重整句，也出現在非結構重整句。不過，不管哪一種句型，主句動詞都高度受限：前者主句動詞限於結構重整動詞，後者限於具有域外論元的動詞。在結構重整句裡，主句動詞之域外論元為一惰性論元，不阻隔補語句之賓語提升，形成主句非主焦、補語句主焦的格局；在非結構重整句裡，主句動詞之域外論元為一活性論元，會阻隔補語句的賓語提升，因此補語句不能為非主焦。總之，主焦標記限制為多個因素作用之結果，其中最重要的為局部性條件。

關鍵詞：主焦標記限制，臺灣南島語言，補語句，結構重整，域外論元，局部性條件

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