

To Float or Not to Float: the case of universal quantifier in Kavalan*

Jiang, Haowen

Graduate Institute of Linguistics, National Taiwan University

r92142010@ntu.edu.tw

1. Introduction

In many languages, quantifiers, such as “all” and “each”, may either remain adjacent to the nominals they quantify over or “float” out of them, as illustrated in (1a) and (1b) respectively.

(1) Bobaljik (2001: 1)

- a. ***All** the students have finished the assignment.*
- b. *The students have **all** finished the assignment.*

A quantifier like that in (1b) is frequently referred to as a floating quantifier (FQ) since while semantically quantifying over the referent of a nominal it does not syntactically form a constituent with that nominal, at least in Surface Structure. Since 1970’s FQs have always been an important and controversial issue in formal syntax. Of the many approaches to FQs, the most influential ones are the stranding analysis (Sportiche 1988, Shlonsky 1991) and the adverbial analysis (Dowty and Brodie 1984, Bobaljik 1995/2001). The former adopts a movement analysis whereas the latter assumes a non-movement analysis.

In light of these two approaches, a bulky amount of research on FQs has been conducted (Miyagawa 1989, Fukushima 1991b, Merchant 1996, Doetjes 1997, among others), but only restricted to the investigation of so-called “well-known” languages. Studies of this kind in Formosan languages, however, turn out to be few and far between (see Chang 2002). This current paper thus endeavors not only to fill the gap but also to investigate how the case of the universal quantifier (UQ) *niz* ‘all, each’ in Kavalan, a Formosan language, would invoke any new ideas with respect to the two approaches to FQ.

The following discussion will be centered on, though not limited to, the data in (2~5)¹. Aside from the introduction in this section, the organization of this paper is as

* I would like to thank my Kavalan informant Buya, who kindly and patiently utters every single word for me, even when stricken by sickness. I am also deeply indebted to Pro. Li-May Sung and all the classmates enrolled in Austronesian Syntax. Without their help and advice, this paper could possibly not appear. All errors of course are mine.

¹ The Kavalan data in this paper are all from my personal fieldnote, unless otherwise specified. In all the data presented hereafter, quantifiers are boldfaced while the nominals they quantify over are underlined. Wherever there are multiple interpretations, no nominals will be underlined.

follows: Section 2 reviews some previous observations of FQs and especially the two approaches to FQs, Section 3 analyzes the Kavalan data presented in the introduction, , and finally Section 4 concludes this paper and forwards some questions that require further research to answer.

(2) a. *niz-an-na* *p-em-ukun* *na* *sinsi* 'nay *pataksian*
all-LF-3rd.Gen hit-AF-hit 3rd.Gen teacher Dem students

*b. *p-em-ukun* *niz-an-na* *sinsi* 'nay *pataksian*

*c. *p-em-ukun* *sinsi* 'nay *niz-an-na* *pataksian*

*d. *p-em-ukun* *sinsi* 'nay *pataksian* *niz-an-na*
'The students were all hit by the teacher.'

(3) a. *p-em-ukun* *m-niz* *sinsi* 'nay *tu* *pataksian*
hit-AF-hit AF-all teacher Dem Obl student

b. *p-em-ukun* *sinsi* 'nay *m-niz* *tu* *pataksian*

c. *m-niz* *sinsi* 'nay *p-em-ukun* *tu* *pataksian*

d. *sinsi* 'nay *m-niz* *p-em-ukun* *tu* *pataksian*

e. *m-niz* *p-em-ukun* *sinsi* 'nay *tu* *pataksian*

f. *sinsi* 'nay *p-em-ukun* *m-niz* *tu* *pataksian*

'The teachers all hit the students.'

*'The teachers hit all the students.'

(4) a. *p-em-ukun* *sinsi* 'nay *tu* *m-niz* *pataksian*
hit-AF-hit teacher Dem Obl AF-all student

b. *p-em-ukun* *sinsi* 'nay *pataksian* *m-niz*

'The teacher hit all the students.'

*'The teachers all hit the students.'

(5) a. *m-niz* *pukun-an-na* *sinsi* 'nay *pataksian*
AF-all hit-LF-3rd.Gen teacher Dem student

b. *pukun-an-na* *m-niz* *na* *sinsi* 'nay *pataksian*

c. *pukun-an-na* *sinsi* 'nay *m-niz* *pataksian*

d. *pukun-an-na* *sinsi* 'nay *pataksian* *m-niz*

'The students were all hit by the teacher.'

* 'The students were hit by all the teachers.'

2. Literature Review

2.1 Properties of FQs

In the literature quite a number of properties of FQs have been established. First of all, intuitively a FQ has an identical quantificational force with its non-floating

counterpart, that is, a determiner quantifier (DQ), as shown in (1) and repeated below.

(1) Bobaljik (2001: 1)

- a. *All the students have finished the assignment.*
- b. *The students have all finished the assignment.*

Other than this semantic intuition, FQs in some morphologically rich languages have to agree with the determiner phrases (DP) they are associated with, as is the case with DQs. The examples in French (6) and German (7) both show a gender agreement between a FQ, the quantifier, and a DP, the quantified.

(6) Doetjes (1997: 205)

*Elles sont toutes/*tous allées à la plage.*

They(f.) are all(f.)/all(m.) gone to the beach

‘They all went to the beach.’

(7) Merchant (1996: 4)

*Diesen Studenten habe ich gestern allen/*alle geschmeichelt.*

the(m.) students(m.) have I yesterday all(m.)/all(f.) flattered

‘I flattered all the students yesterday.’

More importantly, the nominals that FQs can quantify over are not grammatically unconstrained. Specifically, the extent a FQ is allowed to float is in part determined by the grammatical relation assumed by the nominal which that particular FQ quantifies over. An interesting example comes from Japanese, where numeral classifiers may float. Examples (4~10) are drawn from Fukushima (1991b: 585-286), who terms the interaction between the quantifier and the quantified “construal”. As seen in the data, construal to indirect object is the most constrained while construal to direct object the most liberated, with construal to subject in the half way of the two.

(8) Construal to Subject

- a. *Syuppansya yon-sya-ga tegami-o sensei-ni okut-ta*
publisher four-class-nom letter-acc teacher-dat send-past
- b. *Yon-sya syuppansya-ga tegami-o sensei-ni okut-ta*
- c. *Syuppansya-ga yon-sya tegami-o sensei-ni okut-ta*
- d. **Syuppansya-ga tegami-o yon-sya sensei-ni okut-ta*
- e. **Syuppansya-ga tegami-o sensei-ni yon-sya okut-ta*
‘Four publishers sent a letter to a teacher.’

(9) Construal to Direct Object

- a. *Syuppansya-ga tegami go-tuu-o sensei-ni okut-ta*
 publisher-nom letter five-class-acc teacher-dat send-past
- b. ***Go-tuu*** *Syuppansya-ga tegami-o sensei-ni okut-ta*
- c. *Syuppansya-ga go-tuu tegami-o sensei-ni okut-ta*
- d. *Syuppansya-ga tegami-o go-tuu sensei-ni okut-ta*
- e. *Syuppansya-ga tegami-o sensei-ni go-tuu okut-ta*
 ‘A publisher sent five letters to a teacher.’

(10) Construal to Indirect Object

- a. *Syuppansya-ga tegami-o erai sensei huta-ri-ni okut-ta*
 publisher-nom letter-acc prominent teacher two-class-dat send-past
- b. ****Huta-ri*** *Syuppansya-ga tegami-o erai sensei-ni okut-ta*
- c. **Syuppansya-ga huta-ri tegami-o erai sensei-ni okut-ta*
- d. **Syuppansya-ga tegami-o huta-ri erai sensei-ni okut-ta*
- e. **Syuppansya-ga tegami-o erai sensei-ni huta-ri okut-ta*
 ‘A publisher sent a letter to two prominent teachers.’

An important issue for construal pattern is the locations onto which FQs are allowed to float. In most languages, FQs occupy the positions where adverbs canonically surface, as shown in the English example below, where there are four possible locations for the universal quantifier “all” to float onto.

(11) Kayne (1975: 46)

The children {all} would {all} have {all} been {all} doing that.

Last but not the least of all, the quantified nominals must c-command the FQs that quantify over them. In other words, the locality condition has to be satisfied. For instance, since the object of the preposition in the English example (‘my friends’ in 12a) as well as its French counterpart (‘mes amis’ in 12b) does not c-command the universal quantifier (‘all’ and ‘tous’ respectively), the construal pattern is forbidden, thus rendering (12) ill-formed.

(12) Kayne (1981: 196)

- a. * *[The mother of my friends_i] have all_i left.*
- b. * *[La mère de mes amis_i] est tous_i partie.*

2.2 The stranding analysis

To explain the properties of FQs mentioned above, two major approaches have been proposed, namely the stranding analysis and the adverbial analysis. The

stranding analysis, as expounded by Sportiche (1988) and later supported by Shlonsky (1991) and many others, suggests FQ be stranded with a DP trace in [Spec, VP] and that this DP move to [Spec, IP], implicitly assuming the VP-internal subject hypothesis. An diagramed in Figure 1, when the quantifier ‘all’ moves along with the DP ‘the students’ to [Spec, IP] (13a) will be derived; when only the DP moves upward (13b) will be derived instead.

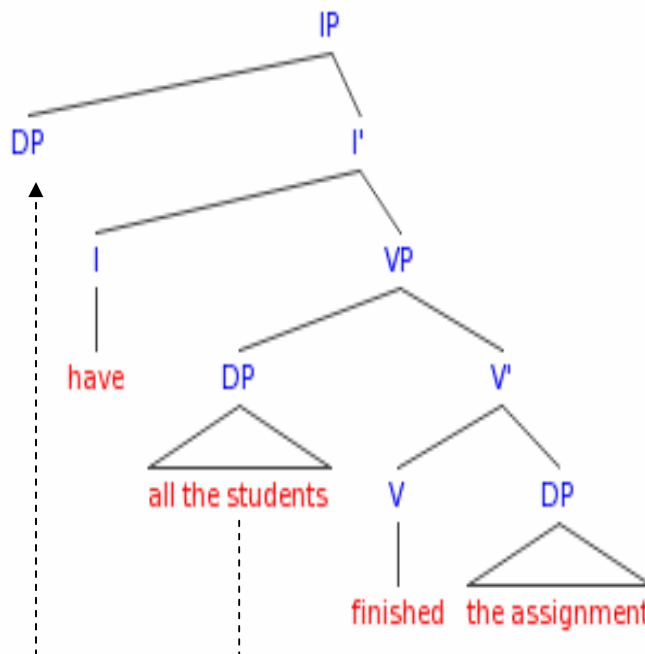


Figure 1: *Tree diagram for the stranding analysis*

(13) Modified from (1)

- a. *All the students_i have [t_i] finished the assignment.*
- b. *The students_i have [all t_i] finished the assignment.*

In addition to the immediate consequence of establishing a transformational relationship between (13a) and (13b), the stranding analysis has other advantages. First, since FQ and DP are in the same constituent in Deep Structure it follows that FQ is able to modify DP and even to agree with it in some languages. Second, FQ occupies the left periphery of VP, the exact positions where adverbials typically surface. Third, like an NP movement, the moved DP c-commands its trace stranded with FQ, thus explaining the locality condition.

2.3 *The adverbial analysis*

Unlike the stranding analysis, the adverbial analysis, as proposed by Dowty and

Brodie (1984) and advocated recently by Bobaljik (1995, 2001), proposes that FQs are predicate modifiers in nature. Among the many arguments arguing for this analysis the most critical points are the following two. One is that are FQs and DQs are not so much similar as the stranding analysis has supposed. For instance, compared with (14a), (14b) has an extra generic reading to the effect that generally speaking lions, tigers, and bears are scary. Moreover, DQs may take a wide scope over or a narrow scope under a modal whereas FQs can only take a narrow scope under a modal, as shown in (15a) and (15b) respectively.

(14) Bobaljik (2001: 29)

- a. *All lions, tigers, and bears are scary.*
- b. *Lions, tigers, and bears are all scary.*

(15) Bobaljik (2001: 30)

- a. *All the contestants could have won.* $\forall > \diamond; \diamond > \forall$
- b. *The contestants could have all won.* $*\forall > \diamond; \diamond > \forall$

The other point is that DP quantifiers and VP quantifiers are not so much different as the stranding analysis has proposed. The stranding analysts are reluctant to treat FQs as VP quantifiers since they consider it theoretically undesirable that the same nominal can be modified by two qualitatively different kinds of modifiers, that is, DP quantifiers (i.e. DQs) and VP quantifiers (i.e. FQs). Many pairs of examples like those in (16), however, demonstrate that the difference between DP and VP quantifiers is tiny, if not zero.

(16) Lahiri (1991: 120f)

- a. *The children, for the most part, were playing in the garden at 6pm.*
- b. *Most of the children were playing in the garden at 6pm.*

3. Universal Quantifier in Kavalan

In light of the many properties of and two approaches to FQs, we shall focus on the syntactic behaviors of the universal quantifier *niz* in Kavalan. On the whole, while the universal quantifier *niz* in Locative Focus (LF), that is, *niz-an*, is a predicate that does not float its counterpart in Actor Focus (AF), that is, *m-niz*, is a nominal modifier that is susceptible to floating or an adverbial that may absorb predicate features such as the affixation of pronominal enclitics.

3.1 UQ in Locative Focus (*niz-an*)

Syntactically the mutation between *niz-an* and its following predicate is not

permitted, as seen in (17).

- (17) a. *niz-an-na* *p-em-ukun* *na* *sinsi* *pataksian*
 all-LF-3rd.Gen hit-AF-hit 3rd.Gen teacher student
 *b. *p-em-ukun* *niz-an-na* *sinsi* *pataksian*
 ‘The students were all hit by the teacher.’

Also, *niz-an* has to respect the AF-restriction, which dictates the following predicate be in AF rather than PF, as in (18).

- (18) a. *niz-an-na* *p-em-ukun* *na* *sinsi* *pataksian*
 all-LF-3rd.Gen hit-AF-hit 3rd.Gen teacher student
 *b. *niz-an-na* *pukun-an-na* *sinsi* *pataksian*
 all-LF-3rd.Gen hit-LF-3rd.Gen teacher student
 ‘The students were all hit by the teacher.’

More importantly, *niz-an* can even serve as an independent predicate, thus dispensing with another predicate. In this case, *niz-an* semantically denotes the telicity of an action event instead of quantifying over an individual, so it normally bears the meaning of “completely”, “entirely”, or “totally”. In (19) although *q-em-an* ‘eat-AF-eat’ is unexpressed, it is implicit that those children “ate up” the bananas. Another related example is (20), where the two arguments involved are both singular. We can be definitely sure that *niz-an* in this example does not quantify over any individual since in the first place there is no plural entity the universal domain of which can be referred to.

- (19) *niz-an-na* *sunis* ‘*nay* *benina* ‘*nay*
 all-LF-3rd.Gen child Dem banana Dem
 ‘Those children ate up the bananas.’
 (20) *niz-an-ku* *ti* *t-em-ita* *sulal* *zau*
 all-LF-1Sg.Gen Perf see-AF-see book this
 ‘I’ve finished reading this book completely.’

In cases where *niz-an* does quantify over individuals, the restriction of the universal quantifier is invariably the grammatical subject in [Spec, IP] and never the Actor in [Spec, VP], as evidenced in (21) and (22).

- (21) *niz-an-na p-em-ukun na sinsi 'nay pataksian*
 all-LF-3rd.Gen hit-AF-hit 3rd.Gen teacher Dem students
 'The students were all hit by the teacher.'
 * 'The students were hit by all the teachers.'

- (22) *niz-an-ta bura tu benina sunis 'nay*
 all-LF-1Pl.Gen.Incl give(AF) Obl banana child Dem
 'The children were all given bananas by us.'
 * 'The children were given all the bananas by us.'
 * 'The children were given bananas by all of us.'

Given the aforementioned phenomena and following the same argumentation in Chang (2004), we may summarize this subsection as follows: although semantically being either a predicate modifier or a nominal quantifier, *niz-an* is syntactically a higher verb that selects a reduced clause (due to the AF-restriction) as its optional complement. As for the issue of FQs, unlike many other languages where the construal pattern holds between an adverbial quantifier and a nominal, Kavalan exhibits a special kind of construal pattern that holds between a predicate and its grammatical subject.

3.2 UQ in Actor Focus (*m-niz*)

Unlike *niz-an*, *m-niz* can not only mutate with another verbal predicate but also ignore the AF restriction, as shown in (23) and (24) respectively.

- (23) a. *m-niz m-Rasa sunis 'nay tu sulal*
 AF-all AF-buy child Dem Obl book
 b. *m-Rasa m-niz sunis 'nay tu sulal*
 'All the students buy books.'
- (24) a. *m-niz p-em-ukun sinsi 'nay tu pataksian*
 AF-all hit-AF-hit teacher Dem Obl student
 'The teachers all hit the students.'
 b. *m-niz pukun-an-na sinsi 'nay pataksian*
 AF-all hit-LF-3rd.Gen teacher Dem student
 'The students were all hit by the teacher.'

Compared with *niz-an*, *m-niz* is syntactically much more flexible, as contrasted in (2) and (3), repeated below.

- (2) a. *niz-an-na* *p-em-ukun* *na* *sinsi* 'nay *pataksian*
 all-LF-3rd.Gen hit-AF-hit 3rd.Gen teacher Dem students
 *b. *p-em-ukun niz-an-na sinsi* 'nay *pataksian*
 *c. *p-em-ukun sinsi* 'nay *niz-an-na pataksian*
 *d. *p-em-ukun sinsi* 'nay *pataksian niz-an-na*
 'The students were all hit by the teacher.'
- (3) a. *p-em-ukun m-niz sinsi* 'nay *tu pataksian*
 hit-AF-hit AF-all teacher Dem Obl student
 b. *p-em-ukun sinsi* 'nay *m-niz tu pataksian*
 c. *m-niz sinsi* 'nay *p-em-ukun tu pataksian*
 d. *sinsi* 'nay *m-niz p-em-ukun tu pataksian*
 e. *m-niz p-em-ukun sinsi* 'nay *tu pataksian*
 f. *sinsi* 'nay *p-em-ukun m-niz tu pataksian*
 'The teachers all hit the students.'
 *'The teachers hit all the students.'

When it comes to semantics, *m-niz* seems to quantify over the nearest NP that it forms a constituent with.² Compare the readings in (3) and (4). A first impression is that other things being equal *m-niz* quantifies over the grammatical subject when placed in any positions before the oblique marker *tu* and over the nominal in oblique case when placed in any positions after the oblique marker.

- (4) a. *p-em-ukun sinsi* 'nay *tu m-niz pataksian*
 hit-AF-hit teacher Dem Obl AF-all student
 b. *p-em-ukun sinsi* 'nay *tu pataksian m-niz*
 'The teacher hit all the students.'
 *'The teachers all hit the students.'

Under some circumstances, however, *m-niz* may create ambiguity. Both (25) and (26) have two interpretations, that is, the two arguments involved in each example can both be quantified over by *m-niz*. While the ambiguity in (25) is anticipated if we view *m-niz* as a nominal modifier that functions both prenominally and postnominally the ambiguity in (26) is unexpected since there is a long-distance quantification between the quantified grammatical subject (i.e. the teachers) and the quantifier.

- (25) *qan-an-na sunis* 'nay *m-niz benina* 'nay
 eat-LF-3rd.Gen child Dem AF-all banana Dem

² For the time being, we temporarily ignore the discontinuity (or the floating) in (3e) and (3f).

‘The bananas were all eaten by the children.’

‘The bananas were eaten by all the children.’

(26) *p-em-ukun sinsi ‘nay tu pataksian m-niz* (=4b)

hit-AF-hit teacher Dem Obl student AF-all

‘The teachers hit all the students.’

‘The teachers all hit the students.’

Long-distance quantification of this kind, nevertheless, is not simply a coincidence. On the contrary, it can be seen in various constructions, as shown in (27)³.

(27) a. *m-‘etong Ronanay tu taqoq m-niz*

AF-kill man Obl chicken AF-all

‘The men all killed chickens.’

b. *m-atiw Ronanay (pa)sa lamu m-niz*

AF-go man to(ward) village AF-all

‘The men all went to the village.’

c. *m-nanguy Ronanay ta-iRoR-an m-niz*

AF-swim man Loc-river-Loc AF-all

To confirm our speculation about the syntactic status of *m-niz*, we double its occurrences and juxtapose them with *niz-an*, as in (28). The two tokens of *m-niz* here are both optional. In other words, each argument can be accompanied by a token of *m-niz* as long as the meaning thus composed is acceptable. Once again, it is found that *m-niz* acts like a nominal modifier while *niz-an* a verbal predicate.

(28) *benina ‘nay m-niz niz-an-na q-em-an na sunis ‘nay m-niz*

banana Dem AF-all all-LF-3rd.Gen eat-AF-eat 3rd.Gen child Dem AF-all

‘All the bananas were eaten up by all the children.’

³ Unlike (26), all the examples in (27) are unambiguous since there is an unequal agentivity between the subject and the adjunct. Moreover, there exists an interesting phenomenon the explanation of which goes beyond the scope of this paper. Briefly speaking, when the demonstrative *‘nay* is present modifying the adjunct, the interpretation will be quite different, as shown below.

i. *m-‘etong Ronanay tu taqoq ‘nay m-niz*

AF-kill man Obl chicken Dem AF-all

‘The man killed all the chickens.’

That *niz-an* can be an independent predicate has been illustrated in (19), renumbered as (29a) below, but its counterpart in AF, shown in (29b), is totally unacceptable. This result demonstrates that unlike *niz-an*, *m-niz* cannot be an independent predicate although it is inflected for Focus.

- (29) a. *niz-an-na sunis 'nay benina 'nay*
 all-LF-3rd.Gen child Dem banana Dem
 'The bananas were eaten up by the children.
- b. **m-niz sunis 'nay tu benina 'nay*
 AF-all child Dem Obl banana Dem
 Intended meaning: 'All the children ate the bananas.'

More evidence to support the nominal modifier status of *m-niz* comes from the following two dialogues in (30) and (31), where *m-niz* co-occurs with only the nominal it quantifies over. Since an answer to a question usually forms a constituent it may be safe to consider *m-niz* an NP modifier.

- (30) Q: *kin-tani sunis 'nay q-em-an tu benina*
 class(human)-how_many child Dem eat-AF-eat Obl banana
 'How many children ate bananas?'
 A: *m-niz sunis 'nay*
 AF-all child Dem
 'All the children.'
- (31) Q: *u-tani benina 'nay qan-an-na sunis*
 class(non-human)-how_many banana Dem eat-LF-3rd.Gen banana
 'How many bananas were eaten by children?'
 A: *m-niz benina 'nay*
 AF-all banana Dem
 'All the bananas.'

If this is the case, how shall we explain the two examples in (32) and (33), where *m-niz* floats out of the nominal phrase it modifies? Note that whenever the universal quantifier floats it is associated with the grammatical subject, and this would encourage us to adopt the stranding analysis.

- (32) *p-em-ukun sinsi 'nay tu pataksian m-niz (=26)*
 hit-AF-hit teacher DM Obl student AF-all
 In one of two readings: 'The teachers all hit the students.'

- (33) *pukun-an-na m-niz na sinsi 'nay pataksian*
 hit-LF-3rd.Gen AF-all 3rd.Gen teacher Dem student
 'The students were all hit by the teacher.'

Assuming the D-structure proposed by Guilfoyle et al. (1992) for Austronesian languages such as Malagasy, Bahasa, Cebuano, and Tagalog and attaching an Focus Phrase (FP) above VP since Focus is a prominent predicate feature in Kavalan as well as in other Austronesian languages, we diagram the phrasal structure tree for (32) in Figure 2. Note that the phrase *tu pataksian* is treated here as an adjunct of V rather than a complement since it is marked by an oblique case. To derive the surface structure, three movements are needed. First, V has to move to F to check the focus feature and then moves to I to be a full-fledged predicate. Second, the nominal *sinsi* moves to [Spec, FP] since it is the focused phrase. Third, KP is adjoined to the adjunct of VP.⁴ The adjunction, however, is optional since it may remain in the original position, as in (32').

- (32') *p-em-ukun sinsi 'nay m-niz tu pataksian (=3b)*
 hit-AF-hit teacher DM AF-all Obl student
 'The teachers all hit the students.'

⁴ In fact, KP can also be adjoined to the adjunct of FP, as seen in the following example.

i. *p-em-ukun tu pataksian sinsi 'nay m-niz*
 hit-AF-hit Obl student Obl student AF-all
 'The teachers all hit the students.'

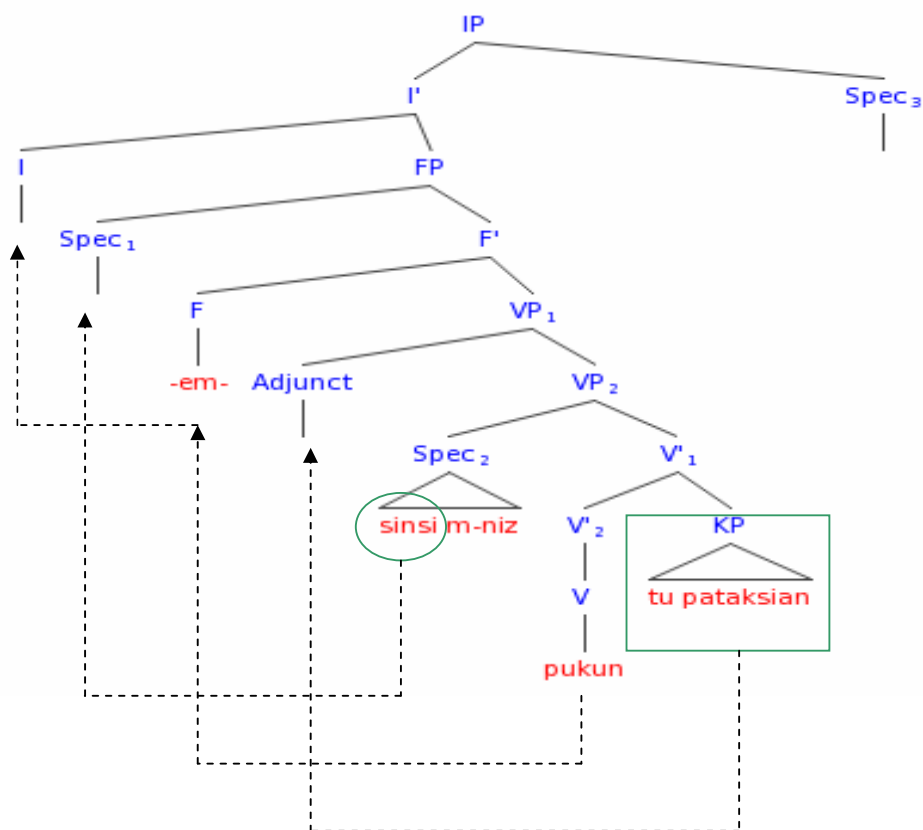


Figure 2: Tree diagram for (32)

Similarly, the phrasal structure tree for (33) is diagrammed in Figure 3. To derive the surface structure, we also need three movements. First, as in Figure 2, V moves to F and then to I. Second, much like the KP adjunction in Figure 2, Spec of VP, or the agent, is adjoined to the other side of V'. The adjunction here is also optional since Spec of VP may remain *in-situ*, as shown in (33'). Third, the nominal *pataksian* moves to [Spec, IP] since it is the grammatical subject.

(33') *pukun-an-na sinsi 'nay pataksian m-niz* (=5d)
 hit-LF-3rd.Gen teacher Dem student AF-all
 'The students were all hit by the teacher.'

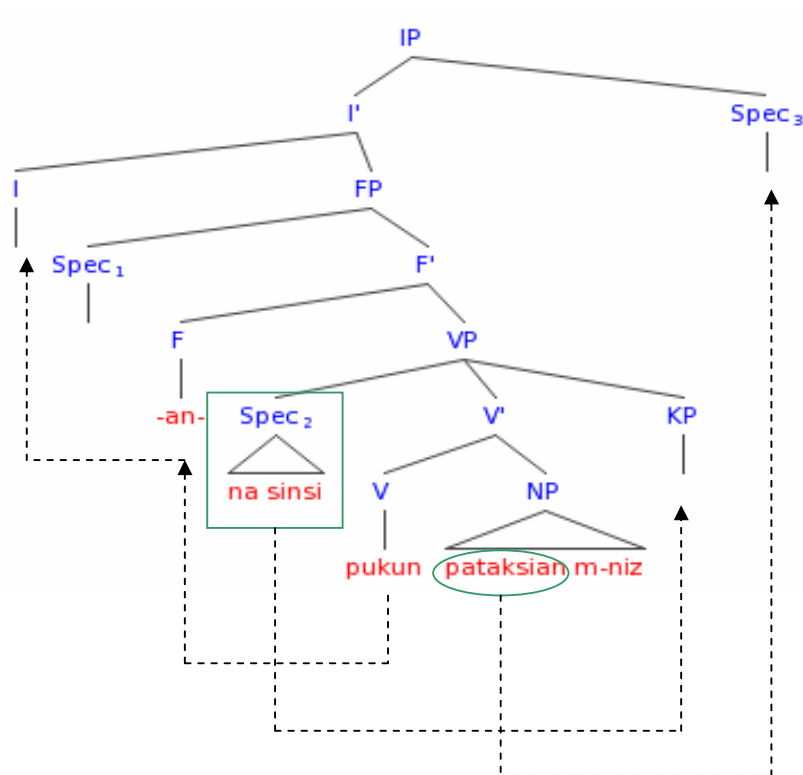


Figure 3: Tree diagram for (33)

In spite of the analysis stated so far, the whole story, nevertheless, has not come to an end yet. Note that in (34a) *m-niz* is affixed by a pronominal enclitic while in (34b) it precedes another predicate affixed by the enclitic. Moreover, whether *m-niz* is followed by an AF or LF predicate, the restriction of the universal quantifier goes to the focused nominal, or the grammatical subject, as seen in (34b) and (35). In other words, it is the focused phrase of the following predicate that determines the interpretation of the sentence-initial *m-niz*. In this case, *m-niz* seems to be better analyzed as an adverbial modifier for V-projections.

- (34) a. *m-niz-ita* *p-em-ukun tu sunis*
 AF-all-1Pl.Nom.Inclu hit-AF-hit Obl child
 b. *m-niz p-em-ukun-ita tu sunis*
 ‘We all hit children.’
- (35) *m-niz pukun-an-na sinsi* ‘*nay pataksian* (=5a)
 AF-all hit-LF-3rd.Gen teacher Dem student
 ‘The students were all hit by the teacher.’

Another reason to believe the sentence-initial *m-niz* is an adverbial is the

asymmetry found between the grammatical subject and the oblique-marked phrase. In (36) while the prenominal modifier *m-niz* is optionally followed by the relativizer *ay* when quantifying over an oblique-marked phrase it can never be followed by the relativizer when quantifying over the subject.⁵ This implies that *m-niz* in (36b) may not be a nominal modifier but an adverbial instead although it is immediately followed by a nominal phrase.

- (36) a. *p-em-ukun sinsi 'nay tu m-niz (ay) pataksian*
 hit-AF-hit teacher Dem Obl AF-all Rel student
 'The teacher hit all the students.'
- b. *m-niz (*ay) sinsi 'nay p-em-ukun tu pataksian*
 AF-all Rel teacher Dem hit-AF-hit Obl student
 'All the teachers hit the students.'

What's more, the sentence initial position is exactly where adverbial predicates in Kavalan typically surface. For instance, in (37) frequency modifiers also occupy the sentence-initial position.

- (37) Chang (2004)
- a. *pataz m-uzan*
 often(AF) AF-rain
 'It often rains.'
- b. *pataz supas-an-na ya qitun*
 often(AF) buff-PF-3S.Gen Nom car
 'He often buffed his car.'

Accordingly, as far as the available data are concerned *m-niz* is found to be a nominal modifier on the one hand, allowed to float when quantifying the grammatical subject and an adverbial modifier for V-projections on the other, when occupying the sentence-initial position. Although that *m-niz* resists the analysis of a unified syntactic category may be undesirable, the result would not be that surprising when examined in the context of language change. Presumably *m-niz* might first surface as an adverbial predicate since it is inflected for Focus and has an LF counterpart *niz-an*, and later change into a nominal modifier due to its constant semantic association with nominal phrases.

⁵ It is speculated that the prenominal use of *m-niz* is the result of the reduction of the relativizer, which typically intervenes between a prenominal modifier and a modified phrase. For example, "many people" should be rendered as *mazmun ay razat* 'many Rel people' according to Chang (2000:67). Our informant, however, uses only *mazmun razat*, thus dispensing with the relativizer.

4. Conclusion

In this paper we have investigated the universal quantifier in Kavalan by looking into its syntactic behaviors and semantic interpretations, with the whole discussion centered on the issue of floating quantifiers. UQ in Kavalan is found to behave quite differently when inflected for different focuses. On the one hand, UQ in LF (*niz-an*) is syntactically a higher verb that selects a reduced clause as its optional complement, although semantically being either a predicate modifier or a nominal quantifier. Moreover the construal pattern holds between a main predicate and its grammatical subject rather than between an adverbial and a verbal phrase as is often the case in many other languages. In light of this, “floating” may not be a descriptively adequate term for *niz-an*.

UQ in AF (*m-niz*), on the other hand, is a nominal modifier, susceptible to floating when quantifying over the grammatical subject, as well as an adverbial modifier for V-projections when occupying the sentence-initial position. Although the result may not be elegant, it provides us a new perspective to the stranding and adverbial analysis. Explicitly, the stranding analysis explains the syntactic behavior of FQ in Kavalan as a nominal modifier but not as a predicate-like adverbial, and the situation is the other way around when it comes to the adverbial analysis. In other words, it is the dual syntactic status of UQ in AF (*m-niz*) as both a nominal modifier and a predicate-like adverbial that invites us to surmise the two approaches to FQs might not be conflicting but complementary instead.

As a final point, there remain some questions that require further research to answer. An immediate question that may arise due to the extensive distribution of *m-niz* is how the floating UQ is going to interact with the negator. In (38), for instance, the UQ takes a wide scope over the negator, as is indicated by the linear relationship between the two semantic functors. When *m-niz* floats across the negator to other possible positions, the explanation of the presence/absence of the ambiguity resulting from the scope interpretation is definitely worthy of another paper (maybe more).

- (38) *pataksian m-niz may m-Rasa tu sulal*
 students AF-all Neg AF-buy Obl book
 ‘None of the students buys a book.’

References:

- Bobaljik, Jonathan David 1995. *Morphosyntax: the syntax of verbal inflection*. Ph.D. Dissertation, MIT, Cambridge, Mass.
- Bobaljik, Jonathan David 2001. Floating Quantifiers: Handle with Care. *State of the Article Book*.
- Chang, Henry Yungli. 2002. Distributivity, plurality, and reduplication in Tsou, *Tsing Hua Journal of Chinese Studies*, Special Issue.
- Doetjes, Jenny (1997). *Quantifiers and selection: on the distribution of quantifying expressions in French, Dutch and English*. HIL Dissertation #32 (Leiden). [Chapter 8: Floating Quantifiers].
- Dowty, D. and B. Brodie. (1984). The Semantics of Floated Quantifiers in a Transformational Grammar. *Proceedings of the West Coast Conference*
- Fukushima, Kazuhiko (1991b). Phrase structure grammar, Montague semantics, and floating quantifiers in Japanese. *Linguistics and Philosophy* 14, 581-628.
- Guilfoyle, Eithne, Hung, Henrietta, and Travis, Lisa. 1992. Spec of IP and Spec of VP: Two Subjects in Austronesian Languages. *Natural Language and Linguistic Theory* 10:375-414.
- Merchant, Jason (1996a). Object scrambling and quantifier float in German. In Kiyomi Kusumoto, ed., *Proceedings of NELS 26*, 179-193.
- Miyagawa, S. (1989). Structures and Case-marking in Japanese: *Syntax and Semantics* 22. San Diego: Academic Press.
- Shlonsky, Ur 1996 Review of Bobaljik (1995) 'Morphosyntax'. *Glott International* 2: 11-14.
- Sportiche, Dominique 1988 A Theory of Floating Quantifiers and its Corollaries for Constituent Structure. *Linguistic Inquiry* 19: 425-449.
- 張永利，2000，*葛瑪蘭語參考語法* 222，遠流出版社，台北。