

The Structure of Relative Clauses in Jianshi Squliq Atayal*

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The purport of this paper is to investigate the structure of relative clauses in Jianshi Squliq Atayal. In terms of the external structure between relative clause and head noun, it is shown that the unmarked word order is postnominal and that prenominal relative clauses are only licensed by topic. This incongruity is due to the restrictiveness of prenominal relative clauses and the influence of discourse structure. As for the internal structure inside relative clauses, it is observed that relativization in Jianshi Squliq Atayal complies with the subject-only constraint in Givón (1990). Besides, this constraint also applies to the resumptive pronouns in relative clauses. Even genitive resumptive pronouns have to occur inside the subject noun phrase. Finally, with the support of the *wh*-island, it is proven that relativization in Jianshi Squliq Atayal does not involve movement, unlike what we can see in English.

Key words: external structure, linear order, topic, internal structure, subject-only constraint, resumption, movement

1. Introduction

With the accumulation of several decades' research, the field linguistics on Formosan languages has become prosperous nowadays. More and more linguistic issues are included in this field. One of these issues concerns the structure of relative clauses (RCs). The structure of RCs is discussed in many other Formosan languages (see references). For instance, a series of papers on RCs in Amis have been published, i.e. Wu (1995, 1996, 1997). However, as one of Formosan languages, Atayal seems to lack some pieces of jigsaws in this area. This paper aims to give a more complete picture to RCs in Atayal. To be more specific, the target language is Squliq Atayal, the most dominant and homogeneous dialect in Atayal.¹

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The abbreviations used in this paper are:

-: morphological boundary, 1/2/3: Person, Acc: Accusative, AF: Agent Focus, Aux: Auxiliary, Ft: Future Tense, Gen: Genitive, HN: head noun, IF: Instrument Focus, LF: Location Focus, Lin: Linker, Nom: Nominative, Obl: Oblique, Par: Particle, Perf: Perfective Aspect, PF: Patient Focus, Pl: Plural, Prog: Progressive Aspect, Pst: Past Tense, RC: relative clause, S: Singular, Top: Topic.

¹ The Atayal language can be divided into two major dialects, Squliq Atayal and Cʔuliʔ Atayal. Generally speaking, Cʔuliʔ Atayal is more complex and heterogeneous than Squliq Atayal in phonological, morphological and syntactic features.

In this paper, we will examine the structure of RCs from two aspects: external and internal. The external structure of RC involves the word order between head noun (HN)² and RC, and the selective restrictions of HN; the internal structure will mention subject-relativization, resumption and the non-movement strategy in RC itself.

2. Literature review

Among previous significant studies on Squliq Atayal, Rau (1992) and L. Huang (1993) each have one section for the discussion of RC. In Rau (1992), only three examples are provided with little elaboration. As for L. Huang (1993), she researches the semantic roles which HN carries in the main clause and in the RC, and the generalization is that HN can bear any semantic role either in the main clause or in the RC. One thing is noteworthy: the data in both Rau (1992) and L. Huang (1993) are based on the Squliq Atayal spoken in Wulai while those in this paper are in Jianshi. Even though Squliq Atayal is a more homogenous dialect, there are still some slight varieties, some of which about RCs will be mentioned in the rest of this paper.

3. External structure

In this section, we will discuss the interaction between HN and RC in Squliq Atayal. This involves two phenomena: one is about the relative word order between HN and RC, and the other is about the selective restrictions of HN.

3.1 Word order

In Squliq Atayal, RC can follow its HN, as shown below:

- (1) *cyux* *m-ʔuyay* *quʔ* ***kneril*** *kaʔ* *m-n-ihiy* *yumin*
 Aux.Prog AF-hungry Nom woman Lin AF-Perf-beat Yumin
 ‘The woman who has beaten Yumin is hungry.’

In (1), the HN *kneril* “woman”, which precedes the nominative case marker *quʔ*, is the subject of the main predicate *cyux mʔuyay*. The predicate in RC is *mnihiy yumin* “have beaten Yumin”, and there is a linker *kaʔ* intervening between the HN *kneril* and the RC. Note that this linker does not exist in Wulai Squliq Atayal (see Rau 1992 and L. Huang 1993) even though the Atayal dialects spoken in Wulai and Jianshi both

² In this paper, “head noun” is a general term indicating the noun that is modified by a relative clause.

belong to the Squliq dialect.³

In order to show the word order completely, the following sentences are arranged according to the grammatical roles which HN carries in the main clause: topic, subject and object. The following sentences are added with brackets in RCs to facilitate perusal:

(2) Topic Position

- a. [m-n-ihiy yumin ka?] **kneril** ga? cyux m-ʔuyay la
 AF-Perf-beat Yumin Lin woman Top Aux.Prog AF-hungry Par
 ‘As for the woman who has beaten Yumin, (she) is hungry.’
- b. **kneril** [ka? m-n-ihiy yumin] ga? cyux m-ʔuyay la
 woman Lin AF-Perf-beat Yumin Top Aux.Prog AF-hungry Par
 ‘As for the woman who has beaten Yumin, (she) is hungry.’

(3) Subject Position

- a. ?*cyux m-ʔuyay qu? [m-n-ihiy yumin ka?] **kneril**
 Aux.Prog AF-hungry Nom AF-Perf-beat Yumin Lin woman
 ‘The woman who has beaten Yumin is hungry.’
- b. cyux m-ʔuyay qu? **kneril** [ka? m-n-ihiy yumin]
 Aux.Prog AF-hungry Nom woman Lin AF-Perf-beat Yumin
 ‘The woman who has beaten Yumin is hungry.’

(4) Object Position

- a. *s-m-oya [m-n-ihiy yumin ka?] **kneril** qu? watan
 AF-like AF-Perf-beat Yumin Lin woman Nom Watan
 ‘Watan likes the woman who has beaten Yumin.’
- b. s-m-oya **kneril** [ka? m-n-ihiy yumin] qu? watan
 AF-like woman Lin AF-Perf-beat Yumin Nom Watan
 ‘Watan likes the woman who has beaten Yumin.’

The HN in (2), *kneril* “woman”, is in the topic position since it precedes the topic marker *ga?*. When the HN is a topic, RCs can either precede the HN as (2a) or follow the HN as (2b). No matter what the linear order is, the linker *ka?* must exist between HN and RC. The two sentences in (3) contain the HNs following the nominative marker *qu?*, which indicates these two HNs in the subject position. Nevertheless, unlike the cases in (2a), when an RC precedes the HN, such as (3a), the

³ In Formosan languages and other Austronesian languages (see Sohn 1973), there are lots of tiny words called “linker”. The grammatical function of some of them is still unclear. Tang (1999) is the first study proving that some of the linkers in Paiwan are actually complementizers.

sentence will become ungrammatical. On the contrary, when an RC follows the HN, the sentence will be well-formed, as shown above in (3b). The same phenomenon happens when RCs modify the object, such as (4). In (4), the verb in the main clause is *smoya* “like”, and the main verb is always sentence-initial since Sqliq Atayal is verb-initial language. The RC in (4a) precedes its HN while the RC in (4b) follows its HN. Like the cases in (3), the pronominal RC results in ungrammaticality.

Based on the above examination, it is obvious that the linear order between HN and RC is sensitive to the grammatical roles HNs bear in the main clause. This can be illustrated in the following table (the asterisk * marks ungrammatical structures while the check √ grammatical ones):

(5)

| | Prenominal RC | HN | Postnominal RC |
|-----------------------|---------------|---------|----------------|
| Grammaticality | √ | Topic | √ |
| | * | Subject | √ |
| | * | Object | √ |

With the illustration of the above table, it is easily perceived that in contrast to postnominal RCs, pronominal RCs are more restricted in their distribution in that they can only modify the HNs as topic. Apparently, pronominal RCs modifying topic are incongruous in the whole system. Why does the topic HN allow pronominal RC while other types of HN forbid this linear order? Let’s keep this question in mind.

If we go further to compare the word order in Jianshi Sqliq Atayal with that in Wulai Sqliq Atayal, another problem will arise. The following sentence is from L. Huang (1993:98):

(6) sic-on-maku? [b-in-aziy-nya hira?] **abaw** qasa
 like-UN-1S.G =past=buy-3S.G yesterday tea that
 ‘I like the tea he bought yesterday.’

In the above sentence, the predicate in the main clause is *sicon-maku?* “be liked by me”, which contains the Patient Focus marker *-on* and the oblique agent *maku?* “I”.⁴ That is to say, the HN *abaw qasa* “that tea” is the subject in the main clause, and the RC precedes the HN. To our surprise, the fact that pronominal RCs modify subject is not permitted in Jianshi Sqliq Atayal. Although this paper focuses on Jianshi

⁴ The Patient Focus marker indicates that the subject in the main clause is a patient. The original form of *-on* is *-un*: the final vowel of the verb *sica* “like” is [a], and it undergoes coalescence with the [u] in the suffix. The details about the focus markers and the pronominal system in Sqliq Atayal should advert to Egerod (1965), Rau (1992), L. Huang (1993), and Huang et al. (1999).

Squliq Atayal, we may give a possible account for this difference by having deeper understanding of RCs in Jianshi Squliq Atayal. Again this possible explanation will be presented later in 3.2.

3.2 Selective restrictions of HN

In Jianshi Squliq Atayal, there are selective restrictions between HN and RC; in other words, not all words can function as an HN, which is shown below:

- (7) ?*siy-on naʔ sayun quʔ **taliʔ** [kaʔ m-n-aniq mquʔ]
 like-PF Obl Sayun Nom Tali Lin AF-Perf-eat snake
 ‘(Lit.) Tali who has eaten snakes is liked by Sayun.’

In this sentence, the HN is *taliʔ*, a proper name for men, and an RC follows this HN. However, native speakers do not accept this sentence. In contrast, once the linker *kaʔ* disappears from the RC, the sentence will become grammatical and the RC is not constrained to be located after the HN:

- (8) a. siy-on naʔ sayun quʔ **taliʔ** [∅ m-n-aniq mquʔ]
 like-PF Obl Sayun Nom Tali ∅ AF-Perf-eat snake
 ‘Tali, who has eaten snakes, is liked by Sayun.’
 b. siy-on naʔ sayun quʔ [m-n-aniq mquʔ ∅] **taliʔ**
 like-PF Obl Sayun Nom AF-Perf-eat snake ∅ Tali
 ‘Tali, who has eaten snakes, is liked by Sayun.’

The original position of the linker is marked with ∅ in (8). The HN in (8) is *taliʔ* as well, but both sentences are grammatical. Besides, the RC *maniq mquʔ* ‘‘have eaten snakes’’ can either follow the HN as (8a) or precede the HN as (8b).

What’s more, when the HN is a kinship term with a unique referent, the interpretation of this type of HN will be influenced by RCs. The HN in the followings is *yaba-muʔ* ‘‘my father’’, which always refers to the unique man in the world for each individual:

- (9) a. [wal m-aniq mqu? ka?] **yaba-mu?** ga? cyux pnepqulih
 Aux.Pst AF-eat snake Lin father-1SGen Top Aux.Prog angle fish
 ‘My father who ate snakes is angling.’ →at least two fathers
- b. **yaba-mu?** [ka? wal m-aniq mqu?] ga? cyux pnepqulih
 father-1SGen Lin Aux.Pst AF-eat snake Top Aux.Prog angle fish
 ‘My father who ate snakes is angling.’ →at least two fathers

Native speakers’ prima facie response to the above two sentences was: the meaning is weird since everyone has only one father. However, after the context where people may have two fathers was given, these sentences were judged perfectly acceptable. Generally speaking, as long as the kinship term with a unique referent is the HN, the RC will bring the implication that the referent is no longer unique and that there exists another similar referent. However, this implication does not exist if there is no linker *ka?* in RC:

- (10) a. [wal m-aniq mqu? Ø] **yaba-mu?** ga? cyux pnepqulih
 Aux.Pst AF-eat snake Ø father-1SGen Top Aux.Prog angle fish
 ‘My father, who ate snakes, is angling.’ →one father
- b. **yaba-mu?** [Ø wal m-aniq mqu?] ga? cyux pnepqulih
 father-1SGen Ø Aux.Pst AF-eat snake Top Aux.Prog angle fish
 ‘My father, who ate snakes, is angling.’ →one father

In these two examples, there is no implication that the addresser has more than one father.

Keenan (1985:142) says, “The restrictive clause identifies a subset of the domain”, and Baker (1995:292) mentions, “When these nouns stand alone, they denote the entire sets. By contrast, when the same nouns are modified, the sets of individuals denoted by the whole expression are those that belong both to the original set and at the same time to a second set.” These definitions indicate that restrictive RC always restricts the referents of HN to a subset of the original whole set. Reminisce the above two properties: RC with the linker *ka?* is incompatible with proper name and brings further implication to the kinship term with a unique referent. These characteristics both show that *ka?*-RC is restrictive since it cannot single out a subset out of the proper name, which refers to the unique referent in the world, and since it forces the unique kinship term to have more than one referent. In terms of these two pieces of evidence, Liu (2004a, 2004b) claims that the RC with *ka?* in Jianshi Sqliq Atayal is restrictive while the RC without *ka?* is non-restrictive. According to previous studies on the distinction between restrictive RC and non-restrictive RC in

English, there should be other criteria from phonological, orthographic, syntactic and semantic aspects (see Bache & Jakobsen 1980, McCawley 1988). Owing to the lacking of orthography and the difference in phonological and syntactic structure, most of the criteria in English cannot be applied to Squliq Atayal. The most solid evidence is from proper name and the kinship term with a unique referent. These two properties are more related to semantics and cognition.

Let's apply Liu's (2004a, 2004b) conclusion to solve the two puzzles mentioned in 3.1. First, why is it that only the NH as topic allows prenominal RCs? As long as we can identify *ka?*-RC is restrictive, the answer will emerge. According to Givón (1990:646), the pragmatic function of restrictive RC is that "[a] restrictive relative clause involves a proposition that the speaker assumes is known or accessible to the hearer, or otherwise unlikely to be challenged as controversial new information." In other words, the information carried by restrictive RC is the old information in the linguistic or situational context, and with the accompaniment of the information carried by restrictive RCs, the HN is easier to identify. Following the spirit of topic continuity in Givón (1983) and information flow in Chafe (1994), we can expect that the older or more accessible information a linguistic element carries, the closer to the sentence-initial position it is to maintain the connection with previous discourse or global topic. That is to say, from the perspective of discourse, it is not marked at all that restrictive RCs as old information are located in the sentence-initial position. Repeat the example (2a) below:

- (11) [m-n-ihiy yumin ka?] **kneril** ga? cyux m-ʔuyay la
 AF-Perf-beat Yumin Lin woman Top Aux.Prog AF-hungry Par
 'As for the woman who has beaten Yumin, (she) is hungry.'

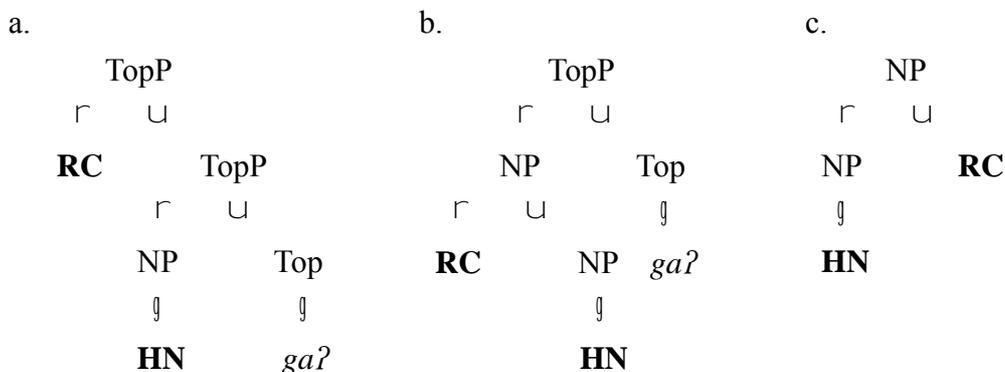
In (11), the whole noun phrase *mnihiy yumin ka? kneril* "the woman who has beaten Yumin" is a sentential topic. As discussed above, the information that the restrictive RC, i.e. *mnihiy yumin ka?*, carries is older or more accessible than that of the HN *kneril*; hence, in this case, that the RC is located in the beginning of a sentence dovetails the general discourse principle. The exceptional linear order between HN and RC in the topic position can be attributed to the influence of the discourse structure.⁵

A more syntax-orientated explanation is that the topic marker *ga?* licenses the

⁵ Jianshi Squliq Atayal is VOS language so the existence of prenominal RCs in subject or object cannot achieve the efficient effect of coherence with previous discourse. Maybe this is the reason why this language generally prohibits prenominal RCs. However, proposing this suggestion must face the challenges from different languages, such as the fact that Chinese RCs must precede HN.

existence of prenominal RCs.⁶ In other words, prenominal RCs may be the adjunct of the topic phrase (TopP), such as (12a), rather than that of the noun phrase (NP), such as (12b), but postnominal RCs are the adjunct of NP like (12c):⁷

(12)



In (12a), the RC modifies the whole TopP, and TopP permits the prenominal RC. We can not only maintain the generalization that NP only licenses right-branching RC like (12c), but also account for the exceptional linear order in the topic position by proposing that TopP licenses left-branching RC. In other words, NP and TopP in Jianshi Squliq Atayal license RCs in different linear orders. Definitely, the crucial difference between (12a) and (12b) still needs further research. Albeit the discourse-orientated explanation and the syntax-orientated one look irrelevant, as a matter of fact, they are mutually dovetailed since topic phrase is the bridge between discourse structure and sentence-internal structure. The force of discourse makes the topic phrase unusually license the unusual prenominal RCs, forming what we can see in the synchronic syntactic structure.⁸

After explaining the exceptional linear order between HN and RC in Jianshi Squliq Atayal, recall that Wulai Squliq Atayal allows prenominal RCs in the subject position, as (13) repeated from (6):

⁶ Thanks to Jo-wang Lin for giving me this suggestion.

⁷ In Generative Syntax, the noun phrase here is lead by an empty determiner; therefore, it should be a DP (determiner phrase), not a pure NP (see Radford 2004). Since this paper focuses on the field linguistics, the theoretical part doesn't go deep.

⁸ If we compare English with Squliq Atayal and Mandarin Chinese, it seems that there is a correlation between prenominal RC and topicalization. Topicalization in these two languages is pretty common while it is rare in English. Similarly, prenominal RC is common in both Squliq Atayal and Mandarin Chinese while it is absolutely ungrammatical in English. It may be plausible to suspect that the more often topicalization a language applies, the more possible this language is to license prenominal RCs. When topicalization is common in a language, it means that this language is easier to be influenced by discourse. Besides, the more often a noun phrase is topicalized, the higher is the possibility that prenominal RCs are licensed. Whether this conjecture is true or not still needs the proof of more typological studies.

- (13) sic-on-maku? [b-in-aziy-nya hira?] **abaw** qasa
 like-UN-1S.G =past=buy-3S.G yesterday tea that
 ‘I like the tea he bought yesterday.’ (L. Huang 1993:98)

Prima facie, it seems to be just the case that Jianshi Squliq Atayal and Wulai Squliq Atayal have different RC structures. However, there is one correlation between RCs in these two languages. Notice that there is no linker *ka?* in Wulai Squliq Atayal RC. As demonstrated in (8) and (10), there are RCs without *ka?* in Jianshi Squliq Atayal, and Liu (2004a, 2004b) proves that this type of RC is different from *ka?*-RC in both semantic interpretation and syntactic structure: the former is semantically restrictive and syntactically externally-headed while the latter is semantically non-restrictive and syntactically internally-headed.⁹ As shown in (8), RC without *ka?* can either precede or follow HN. After taking the linear order into consideration, we will realize that RCs in Wulai Squliq Atayal behaves like RCs without *ka?* in Jianshi Squliq Atayal rather than *ka?*-RCs. Assuming that the dropping of the linker *ka?* is a diachronic syntactic tendency, we can suspect that *ka?*-RC and RC without *ka?* in Jianshi Squliq Atayal converge in Wulai Squliq Atayal. If this proposal is on the right track, it may be expected that the prenominal RC in Wulai Squliq Atayal is non-restrictive whereas the postnominal RC is both restrictive and non-restrictive. Without the support of more data in Wulai Squliq Atayal, this explanation is only our conjecture. More studies are needed.

4. Internal structure

The focus in this section is on the internal structure inside RCs, discussing what grammatical role the HN bears in RCs, resumption and the movement in relativization.

4.1 Subject-relativization

In Jianshi Squliq Atayal, there is usually a gap inside an RC, as shown in (14):

- (14) [m-n-ihiy yumin Ø_i ka?] **kneril**_i ga? cyux m-ʔuyay la
 AF-Perf-beat Yumin Ø Lin woman Top Aux.Prog AF-hungry Par
 ‘As for the woman who has beaten Yumin, (she) is hungry.’

⁹ The existence of internally-headed RCs in Formosan languages has been proven in many studies, such as Teng (1997). As for the evidence in Squliq Atayal, refer to Liu (2004a, 2004b).

In (14), the gap is marked with \emptyset , which is the missing argument of the verb *mihiy* “eat”, and it is co-referential with the HN *kneril* “woman”. As described in Givón (1990:659), “the gap strategy is most commonly found in languages with rigid word order, where inferring the missing argument’s case-role is presumably easier.” Squaliq Atayal seems to completely match this typological observation since the word order is rigidly VOS. However, after second thought, we can find out that the rigid word order in Squaliq Atayal is not at all helpful in recovering the missing argument because normally all arguments of a verb follow that verb. Only observing the word order inside RC is unable for addressers to judge whether subject or object is missing in the RC. Take (14) for example. If the position of the missing argument were not marked with \emptyset , we would not tell whether *yumin*, the only argument left, was the subject or the object.

In fact, how to recover the missing argument depends upon the verb agreement. Like other Formosan languages, the verbal inflections in Squaliq Atayal agree with the semantic roles (theta-roles) of the subject, which is termed as “theta-agreement” in Mei (1994). This theta-agreement exists between the verb in the RC and the HN, as illustrated below:

- (15) [b-n-aziy-maku? ka?] sehuy ga? krahu? ?yal
 Perf-buy.PF-1SObl Lin taro Top big very
 ‘As for the taro which was bought by me, (it) is very big.’

- (16) [wal s-qaniq qulih watan ka?] qway ga? qruyux
 Aux.Pst IF-eat fish Watan Lin chopsticks Top long
 ‘As for the chopsticks which were used to eat fish by Watan, (they) are long.’

- (17) sy-on na? tali? qu? ŋasal [ka? q-aniq-ansehuy na? sayun]
 like-PF Obl Tali Nom house Lin eat-LF taro Obl Sayun
 ‘The house where Sayun ate taros is liked by Tali.’

In (15), the verb *bnaziy* “have been bought” is in the Patient Focus inflection, indicating the HN *sehuy* “taro” is a patient in the RC. As for (16), the verb *sqaniq* “eat” is prefixed with the Instrument Focus marker *s-*, showing the HN *qway* “chopsticks” functions as an instrument in the RC. In (17), the verb is suffixed with the Location Focus marker *-an*, agreeing with the semantic role “location” carried by the HN *ŋasal* “house” in the RC. Based on these data, it is easily perceived that there is no restriction on the semantic role carried by HN, and this observation is identical to what L. Huang (1995) finds in Mayrinax Atayal, a dialect in the Cʔuliʔ

branch.

As mentioned in the previous paragraph, theta-agreement originally exists between verb and subject, but it occurs between the HN and the verb in RC as well; this fact shows that only subject can be relativized in Jianshi Squliq Atayal. Subject-relativization is a ubiquitous characteristic in Formosan languages. Once the missing argument is not subject and the verb does not agree with the HN/the missing argument, the whole sentence will crash. This can be demonstrated by the two sets of examples in (18) and (19):

- (18) a. [wal s-qaniq qulih watan ka?] qway ga? qruyux
 Aux.Pst IF-eat fish Watan Lin chopsticks Top long
 ‘As for the chopsticks which were used to eat fish by Watan, (they) are long.’
- b. *[wal m-aniq qulih watan ka?] qway ga? qruyux
 Aux.Pst AF-eat fish Watan Lin chopsticks Top long
 ‘As for the chopsticks which were used to eat fish by Watan, they are long.’
- c. *[wal s-qaniq qway watan ka?] qulih ga? qruyux
 Aux.Pst IF-eat chopsticks Watan Lin fish Top long
 ‘As for the fish which were eaten by Watan with chopsticks, it is long.’

- (19) a. sy-on na? tali? qu? ŋasal [ka? q-aniq-ansehuy na? sayun]
 like-PF Obl Tali Nom house Lin eat-LF taro Obl Sayun
 ‘The house where Sayun ate taros is liked by Tali.’
- b. *sy-on na? tali? qu? ŋasal [ka? m-n-aniq sehuy qu?]
 like-PF Obl Tali Nom house Lin AF-Perf-eat taro Nom
 sayun
 Sayun
 ‘The house where Sayun ate taros is liked by Tali.’
- c. *sy-on na? tali? qu? sehuy [ka? m-n-aniq ŋasal qu?]
 like-PF Obl Tali Nom taro Lin AF-Perf-eat house Nom
 sayun
 Sayun
 ‘The taro which Sayun ate in the house is liked by Tali.’

In (18a), the HN *qway* ‘chopsticks’, an instrument, is the subject of the verb *sqaniq* ‘eat’ so this verb is marked with the IF marker *s-*. If the focus marker is replaced with the agent focus marker *m-*, such as (18b), then the sentence will be ungrammatical since the verb *maniq* ‘eat’ does not agree with the HN, i.e. the missing argument. Let’s continue to compare (18a) with (18c). Even though the verbs in

these two RCs are both *sqaniq* “eat”, marked with the IF prefix *s-*, their grammaticality is different since the HN *qulih* “fish” in (18c) is not at all the instrument of the verb in this RC. The phenomena in (19) are the same. The well-formedness in (19a) is due to the theta-agreement between the missing argument and the location marker *-an* in that the missing argument is the location in the RC. In contrast, (19b) and (19c) cannot satisfy this condition so they are ill-formed.

Even though the HN is the same word, once its semantic role is changed, the verbal inflection must be changed as well. This is presented below:

(20) [m-n-ihiy yumin ka?] kneril ga? cyux m-ʔuyay la
 AF-Perf-beat Yumin Lin woman Top Aux.Prog AF-hungry Par
 ‘As for the woman who has beaten Yumin, (she) is hungry.’

(21) [wal bhy-an na? yumin ka?] kneril ga? cyux m-ʔuyay
 Aux.Pst beat-PF Obl Yumin Lin woman Top Aux.Prog AF-hungry
 la
 Par
 ‘As for the woman who was beaten by Yumin, (she) is hungry.’

The above two sentences contain the same HN *kneril* “woman” and the same verb *bihiy* “beat” in the RC, but the HNs play different roles: the HN in (20) is an agent of the verb while it is a patient in (21). Therefore, the same verb *bihiy* must be inflected in two different ways: *mnihiy* with the AF marker *m-* in (20) and *bhyan* with the PF marker *-an* in (21).

Generally speaking, what makes subject-relativization successful relies on the complex verbal inflections in Squliq Atayal since all of these inflections are related with subject instead of other arguments. In other words, theta-agreement is the cause and subject-relativization is the effect. Givón (1990:672) says, “The subject-only restriction on relativization is found *only* in languages that gain verb-coding in passivization.”¹⁰ Without these focus/voice inflections, subject-relativization may not apply any longer. Indonesian is a typical example, which is discussed in Cole & Hermon (2005):

(22) Indonesian (slightly modified from Cole & Hermon 2005:67)
 a. *[buku [yang Wati menulis]] ada di atas meja itu
 book that Wati meN-write exist on top table that
 ‘The book that Wati wrote is on the table.’

¹⁰ This insight is also bolstered by the RCs in Polynesian languages (see Kibrik 1992).

- b. [buku [yang Wati ulis]] ada di atas meja itu
 book that Wati Ø-write exist on top table that
 ‘The book that Wati wrote is on the table.’

In (22a), the HN *buku* “book” is a patient of the verb *menulis* “write” but this verb is marked with the agent prefix *men-*, so that the ill-formedness is predictable. Nevertheless, if the same verb is not prefixed with the agent marker *men-*, relativization of the patient *buku* is acceptable, like (22b).¹¹ Besides, since the word order in Indonesian is SVO, the well-formedness in (22b) shows that what is relativized is not subject but object. On the contrary, the same object-relativization is ungrammatical in (22a). It is evident that theta-agreement is the real cause of the subject-relativization constraint.¹²

4.2 Resumption

In addition to the gap strategy, where HN corresponds to an empty missing argument in RC, Jianshi Squliq Atayal permits the existence of resumptive pronouns, which are coreferential with HNs. Although resumptive pronoun is prevailing in some languages such as Hebrew (see Borer 1984), it is seldom reported in Formosan languages. As the subject-only constraint mentioned in 4.1, resumptive pronouns in Jianshi Squliq Atayal only exist in the subject position, exemplified below:

- (23) a. *bnkis_i* [kaʔ m-n-ihiy yumin **hiyaʔ_i**] qasa gaʔ wagaq ʔyal
 old man Lin AF-Perf-beat Yumin 3Nom that Top tall very
 ‘The old man who has beaten Yumin is very tall.’
- b. **bnkis_i* [kaʔ m-n-ihiy **hiyaʔ_i** yumin] qasa gaʔ wagaq ʔyal
 old man Lin AF-Perf-beat 3Nom Yumin that Top tall very
 ‘The old man whom Yumin has beaten is very tall.’
- c. **bnkis_i* [kaʔ b-n-hy-an-**nya_i** yumin] qasa gaʔ wagaq ʔyal
 old man Lin beat-Perf-PF-3Obl Yumin that Top tall very
 ‘The old man by whom Yumin has been beaten is very tall.’

¹¹ Cole & Hermon (2005) follow the convention in previous studies on Malay or Indonesian, terming the prefix *men-* as a transitive prefix. In order to match the convention in the research on Formosan languages, it is called as an agent focus marker in this paper.

¹² Keenan & Comrie (1977) propose the noun accessibility hierarchy, in which the most basic candidate for relativization is subject. From the data in Squliq Atayal, we can perceive that this phenomenon is not puzzling since subject is always the most dominant element in a clause, with which lots of morphological or syntactic structures are correlated. The more complex an element’s relation with others is, the more possible it is to recover this element as a missing argument in RCs.

In (23a), there is a resumptive pronoun *hiya?*, replacing the HN in the RC. Notice that this pronoun must occur in the subject position, which tends to be clause-final in Squliq Atayal. If the resumptive pronoun is an object, like (23b), the sentence will become ungrammatical. Even when the resumptive pronoun appears in the oblique form *-nya* and functions as an oblique argument, such as (23c), the ill-formedness will still be inevitable.

Resumptive pronouns can not only be in the nominative case but also be in the genitive case.¹³ Genitive resumptive pronouns in Jianshi Squliq Atayal only occur in the noun phrase as subject. Once a genitive resumptive pronoun is inside the object, the sentence will crash. Besides, genitive resumptive pronouns must be phonetically-realized. These are illustrated below:

- (24) a. *bnkis_i [ka? b-n-hy-an yumin hozil-**nya_i**] qasa ga? wagyaq ?yal*
 old man Lin beat-Perf-PF Yumin dog-3Gen that Top tall very
 ‘The old man whose dog has been beaten by Yumin is very tall.’
- b. **bnkis_i [ka? b-n-hy-an yumin hozil-Ø_i] qasa ga? wagyaq ?yal*
 old man Lin beat-Perf-PF Yumin dog-Ø that Top tall very
 ‘The old man whose dog has been beaten by Yumin is very tall.’
- c. **bnkis_i [ka? m-n-ihiy hozil-**nya_i** yumin]qasa ga? wagyaq ?yal*
 old man Lin AF-Perf-beat dog-3Gen Yumin that Top tall very
 ‘The old man whose dog Yumin has beaten is very tall.’

In (24a), the genitive pronoun *-nya* in this RC refers to the HN *bnkis* “old man”. The whole noun phrase *hozil-nya* “his dog” functions as the subject in the RC. Without this genitive pronoun, the sentence will become ungrammatical, like (24b). Apparently, the gap strategy discussed in 4.1 does not apply in the genitive position. This is also the fundamental difference between the distribution of gaps and that of resumptive pronouns. In addition, if a genitive resumptive pronoun occurs in the object noun phrase, such as (24c), the sentence will not be acceptable. Why do genitive resumptive pronouns only occur in the noun phrases functioning as subject? In the light of the insight in J. Huang (1984, 1989), the genitive pronoun in the subject position can avoid semantic ambiguity since subject is located in the top of the clause structure. The genitive pronouns in subject can be co-referential with the HN without any obstacle. If the genitive pronoun is inside the object, it may refer to both the subject and the HN at the same time. This ambiguity may cause the difficulty in interpretation.

¹³ Genitive pronouns and oblique pronouns are in the same phonological form in most Formosan languages. Details can refer to Huang et al. (1999).

Moreover, the distribution of genitive resumptive pronouns is not sensitive to the semantic relationship between the possessor and the possessed. For instance, there exists the inalienable relationship between the possessor and the possessed in the following sentences:

(25) a. *kneril_i* [kaʔ siy-on naʔ sayun roziq-**nya_i**] qasa gaʔ blaʔ
 woman Lin like-PF Obl Sayun eye-3Gen that Top good
 kt-an
 see-PF

‘The woman whose eyes are liked by Sayun is beautiful.’

b. **kneril_i* [kaʔ siy-on naʔ sayun roziq-Ø_i] qasa gaʔ blaʔ
 woman Lin like-PF Obl Sayun eye-Ø that Top good
 kt-an
 see-PF

‘The woman whose eyes are liked by Sayun is beautiful.’

According to Tang (1981:127), “inalienable possession is that the relationship between the possessor and the possessed is the relationship between people and their family, between people and their body parts, and between object and space, which is so close and intimate that they cannot be separated or aliened from one another.”¹⁴ Semantically, the possessed *roziq* “eye” is the inalienable body part of the HN *kneril* “woman”, which is co-referential with the genitive resumptive pronoun in (25a) and with the missing argument in (25b). Again the possessor must be a genitive resumptive pronoun, or the whole sentence will be ungrammatical, like (25b). There is no difference between this set of examples and the examples in (24), where no inalienable relationship exists between the possessor *bnikis* “old man” and the possessed *hozil* “dog”. This phenomenon in Jianshi Squliq Atayal is different from the resumption in some Philippine languages (see Reid & Liao 2004).

What’s more, resumptive pronouns only occur in postnominal RCs, not prenominal RCs. This phenomenon is as the following:

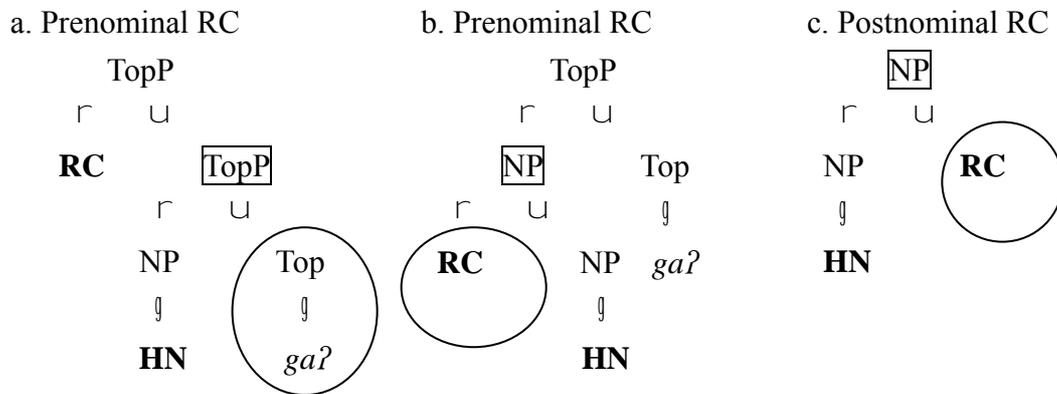
(26) *[m-n-ihiy watan **hiya_i** kaʔ] bnkis_i gaʔ wagmaʔ ʔyal
 AF-Perf-beat Watan 3Nom Lin old man Top tall very
 ‘As for the old man who has beaten Watan, (he) is very tall.’

The topic in (26) embeds a prenominal RC, where there is a resumptive pronoun *hiya*

¹⁴ This English definition is translated from Tang’s (1981:127) original Chinese text.

in the subject position. However, unlike those examples with postnominal RCs, this sentence is ill-formed. This incongruity is a good piece of evidence buttressing the syntactic structure proposed in (12), which is repeated below:

(27)¹⁵



Recall that it is claimed in 3.2 that prenominal RCs are licensed by the topic phrase (TopP), like (27a), rather than the noun phrase (NP), like (27b). The rudimentary difference between these two structures is that the HN in (27a) cannot c-command the RC since this RC is not located in the area contained by the first branching node above the HN, i.e. the inner TopP, while the HN in (27b) c-commands the RC since this RC is located in the area contained by the first branching node above the HN, i.e. the outer NP. As discovered in formal syntactic theories, if the c-commanding relation is built, then the coreferentiality between the HN and the resumptive pronoun will be established as well. However, prenominal RC in Jianshi Squliq Atayal does not allow resumptive pronouns, which indicates that there is no coreferentiality/c-commanding relation between the HN and the resumptive pronoun. This is exactly what we can get from (27a). In other words, since the prenominal RC is licensed by the topic phrase, not the noun phrase, it is far from the HN and they cannot have the same referent. As for postnominal RCs, they are licensed by the noun phrase, as shown in (27c), so that the resumptive pronoun is so close to the HN that the coreferentiality/c-commanding relation can be established.

4.3 Non-movement

As discovered in numerous syntactic studies, relativization in many languages, especially European languages, involves movement. Judging whether there is any movement involved depends upon whether there are island effects. As long as there

¹⁵ To facilitate reading, the first branching node is in the box and the c-commanding domain is in the circle.

exists movement, the moving element cannot move across islands such as sentential subject, adjunct, *wh*-island, etc., since these islands are usually a semantically complete unit (proposition) or since their existence originally involves important semantic function whose interaction with other movement will make sentences semantically uninterpretable. Take English for example. In English RCs, whether there is a phonetically-realized relative pronoun or only a complementizer *that*, movement always applies in relativization, as shown below:

(28) (Radford 2004:229)

- a. *He is someone [**who** nobody knows [*what* the FBA did to]]
- b. *He is someone [**that** nobody knows [*what* the FBA did to]]

The RC in (28a) contains a relative pronoun *who* while the RC in (28b) contains a complementizer *that*. Besides, the RCs in (28a) and (28b) both embed an indirect interrogative sentence *what the FBA did to* (*who*), which is a *wh*-island blocking any movement. Hence, these two sentences are both ungrammatical since the overt/covert relative pronouns cannot move out of the island.

Unlike English, RC in Jianshi Squiliq Atayal does not involve movement at all. The empty missing argument can refer to the HN from the indirect interrogative sentence deeply embedded in the RC. *Wh*-island does not result in any ill-formedness. This is illustrated below:

(29) *Wh*-island

- a.

| | | | | |
|--------|----------|---------------------|-------------------|-------------------------------|
| wagyaq | ʔyal quʔ | kneril _i | [kaʔ baq-un-makuʔ | [m-n-ihiy |
| tall | very Nom | woman | Lin know-PF-1SObl | AF-Perf-beat |
| | | | | <i>imaʔ</i> Ø _i]] |
| | | | | who Ø |

‘(Lit.) The woman that I know she has beaten whom is very tall.’

- b.

| | | | | |
|--------|----------|---------------------|-------------------|--------------------------------|
| wagyaq | ʔyal quʔ | kneril _i | [kaʔ baq-un-makuʔ | [m-n-aniq |
| tall | very Nom | woman | Lin know-PF-1SObl | AF-Perf-eat |
| | | | | <i>nanuʔ</i> Ø _i]] |
| | | | | what Ø |

‘(Lit.) The woman that I know she has beaten what is very tall.’

- c.

| | | | | | | |
|--------------------|------|---------------|-------------|--------------|-------------------|--------------------|
| hozil _i | [kaʔ | baq-un-makuʔ | [m-n-aniq | <i>nanuʔ</i> | Ø _i]] | gaʔ |
| dog | Lin | know-PF-1SObl | AF-Perf-eat | what | Ø | Top |
| | | | | | | <i>krahuʔ</i> ʔyal |
| | | | | | | big very |

‘(Lit.) As for the dog that I know it has eaten what, it’s very big.’

The above three sentences all have complex RCs where an interrogative clause is embedded. The embedded interrogative clauses are marked with bold brackets. From these examples, it is palpable that Jianshi Squliq Atayal is not sensitive to islands. Hence, relativization in Jianshi Squliq Atayal does not apply any movement.^{16,17}

5. Conclusion

In this paper, we have examined the structure of RC in Jianshi Squliq Atayal from two perspectives: the external structure and the internal structure. With regard to the external structure, RC in Jianshi Squliq Atayal contains a linker *ka?* and tends to be postnominal unless it modifies the noun phrase as topic. The topic phrase licenses prenominal RCs because of the influence of discourse. As for the internal structure, owing to the VOS word order and the theta-agreement between subject and verb, RC involves the subject-only constraint mentioned in Givón (1990). Besides, resumption is also a possible strategy in relativization though it is seldom discussed in previous studies on Formosan languages. Like the gap strategy, resumption obeys the subject-only constraint as well. Even genitive resumptive pronouns have to occur in the noun phrase as subject so as to avoid semantic ambiguity. What's more, the non-existence of the resumptive pronoun in prenominal RCs buttresses the claim that prenominal RCs are licensed by the topic phrase. With the support of the *wh*-island effect, we further claim that relativization in this language does not apply movement. This is unlike English, where relativization must resort to the movement of overt/covert relative pronouns.

¹⁶ In addition to Squliq Atayal, relativization in Tsou does not involve movement as well (see Chang 1998). As for other Formosan languages, whether relativization involves movement or not requires further investigation. Notice that not all Austronesian languages apply the non-movement strategy in relativization. According to the previous studies on Malay and Indonesian, relativization in these languages involves movement like English (see Cole & Hermon 2005).

¹⁷ What is involved in the missing argument is still nebulous. If we view the missing argument in RCs as a covert resumptive pronoun, then we can easily explain why both the gap strategy and the resumption comply with the subject-only constraint. As for the fact that the gap strategy doesn't apply in the genitive position, it is due to the lacking of the genitive case of covert resumptive pronouns in Jianshi Squliq Atayal. However, what we cannot explain is why overt resumptive pronouns cannot be in the prenominal RC while covert resumptive pronouns can. To save this viewpoint, we may claim that the missing argument is not a "real" resumptive pronoun but a Pro proposed in J. Huang (1984, 1989).

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尖石賽考利克泰雅語關係子句的結構

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本文目的在於研究尖石賽考利克泰雅語關係子句的結構。就關係子句與先行詞的外部結構而言，最基本的線性次序是置於名詞之後，而名前關係子句只能修飾在話題的名詞組。這樣的不對稱其實是受到關係子句的限制性和言談層次的雙重影響。至於關係子句內部的結構，我們觀察到關係化遵守著 Givón (1990) 所提的「唯主詞」制約，同樣的制約也限制這個語言的接應代詞，甚至連所有格接應代詞都必須出現在主詞名詞內部。最後，藉由疑問詞孤島效應，尖石賽考利克泰雅語的關係子句證實並無牽涉到移位，這一點不同於英語。

關鍵詞：外部結構、線性次序、話題、內部結構、「唯主詞」制約、接應代詞、移位