Interpreting quantification within internally headed relative clauses[*]

Mary Moroney
Cornell University

1. Introduction

This paper presents an account of internally headed relative clauses (IHRCs) that modifies Shimoyama's (1999) E-type analysis by removing the maximalization operator to allow for non-maximal IHRC interpretations. Evidence comes from Yŭn Shan (Southwestern Tai), where internally quantified heads have a non-maximal/non-definite interpretation available, in contrast to languages like Japanese (see, e.g., Hoshi 1995). The non-maximal interpretation described here is similar to the non-maximal interpretation available for anaphoric bare nouns in Inuttut (Gillon 2015), which is also found in Yŭn Shan. Current IHRC analyses cannot capture this pattern. The data and analysis presented here add to the literature on patterns of internally headed relative clauses and anaphora that are found cross-linguistically.

2. Non-maximal IHRCs in Yŭn Shan

Recently, there has been debate in the literature about how to analyze Japanese internally headed relative clauses (IHRCs) (Grosu and Landman 2012; Erlewine and Gould 2016; Grosu and Hoshi 2018; Kitagawa 2019; a.o.). There have been fewer analyses for IHRCs in other languages (see, e.g., Williamson (1987) for Lakhota; Hastings's (2004) analysis of Quechua; Bogal-Allbritten and Moulton's (2017) analysis of Navajo; and Kim's (2009) analysis of Korean. There is still more to say about what types of IHRCs are available cross-linguistically and what analyses can account for IHRCs in other languages. This paper adds an analysis for a language typologically under-represented in the IHRC literature by focusing on Yŭn Shan, an article-less SVO language with non-maximal IHRCs.

Moroney (2018) introduced data on Yŭn Shan IHRCs, which are CNPC island sensitive, non-maximalizing IHRCs. While this previous paper proposed a head raising analysis for Yŭn Shan IHRCs, it did not offer a complete semantic analysis of the phenomenon. The non-maximal interpretation for Yŭn Shan IHRCs that is at issue is demonstrated by the contrast between Japanese and Yŭn Shan, shown in (1)-(2):

▷ **Japanese**:
(1) John-wa [[Mary-ga **san-ko-no ringo-o** muitekureta] -no]-o tabeta.
   John-TOP Mary-NOM three-CL-GEN apple-ACC peeled   NO-ACC   ate
'Mary peeled three apples and John ate them all.'

                                  (Shimoyama 1999: (12), citing Hoshi 1995)

        • Apples Mary peeled: 3
        • Apples John ate: 3

▷ **Yŭn Shan**:[1,2]
 (2) Nan Lĭ cĭn pĕn [ʔăn   Saj   Kham pɤ̀k **màmɔ̂ sǎam hwɨ́**   nâj].
   Nan Li eat up COMP Saj Kham peel   apple   three CL.RND this
'Nan Li ate up apples that Saj Kham peeled of which there are three.'

                                        (Moroney 2018: (18))

        • Apples S.K. peeled: 3
        • Apples N.L. ate: some of the peeled apples

In the Japanese sentence in (1), the numeral meaning 'three' describes both the number of apples peeled and eaten—i.e., the numeral describes the quantity that the IHRC and matrix clause predicates both apply to. However, in the corresponding Yŭn Shan sentence in (2) the numeral 'three' only specifies the number of apples that were peeled—the IHRC clause predicate. In both examples, the numeral modifying the relative clause internal head indicates the number of apples that are peeled, showing that the numeral is construed inside the relative clause, where it appears. The difference lies in the fact that at the matrix clause level, the noun phrase denoted by the internally headed relative clause must be maximal for Japanese but need not necessarily be construed that way for Yŭn Shan.

       Section 3 will discuss previous analyses for Japanese internally headed relative clauses—the most broadly investigated case of IHRCs. Section 4 presents the Yŭn Shan data in more detail. Section 5 discusses the problem of applying previous analyses to this data and argues for an E-type analysis of the data. Section 6 concludes.

3. Previous Analyses of Japanese IHRCs

This section describes three IHRC analyses for Japanese, one of the better analyzed IHRC languages. I focus on three types of accounts: Shimoyama's (1999) E-type account, Grosu & Landman's (2012) choose-role function with raising account, and Erlewine & Gould's 2016 raising with trace conversion account. Previous analyses of IHRCs have focused on accounting for the RC head's interpretation within both the main clause and the relative clause. Additionally, accounts of Japanese have focused on accounting for i. maximality of the relative clause, ii. relative clause-internal construal of quantifiers inside the relative clause, and iii. island sensitivity of IHRCs. According to previous accounts, including Shimoyama 1999 (S), Grosu & Landman 2012 (G&L), and Erlewine &

---

[1] The Shan data comes from my fieldwork with one Shan speaker in Ithaca, NY from January 2016 to September 2017. She is from Mei Wai village, near Papun in Kayin (Karen) State in Myanmar. She speaks the Yŭn Shan dialect, which is very different from the Taunggyi dialect. She also speaks Karen, Burmese, and English. She had been in the United States for 7 years at the time I worked with her. Data was collected using a variety of elicitation methods: telling short stories, grammaticality judgments, and felicity judgments.

[2] Glossing conventions: 1: first person, 3: third person, ACC: accusative, ANIM: animal, CL: classifier, COMP: complementizer, GEN: genitive, IRR: irrealis, NOM: nominative, PERF: perfect, PL: plural, RND: round, SG: singular, TOP: topic

Gould 2016 (E&G), which have all focused on Japanese IHRCs, this definite/maximal interpretation comes from a 'THE' or σ operation taking place at the top of the relative clause, though the source of this definiteness operation is not agreed upon. Examples (3a-3c) represent my interpretation of how each of these previous accounts would analyze the IHRC in (1), repeated below:

▷ **Japanese**:
(1) John-wa [[Mary-ga   **san-ko-no   ringo-o**   muitekureta] -no]-o   tabeta.
     John-TOP   Mary-NOM three-CL-GEN apple-ACC   peeled   NO-ACC ate
'Mary peeled three apples and John ate them all.'

(Shimoyama 1999, citing Hoshi 1995)

      • Apples Mary peeled: 3
      • Apples John ate: 3

(3) a. the maximal individual a such that [λ x $\in$ D$_e$. x is apples m peeled](a) = 1

(S style: see her (37-38))

    b. σ (λx.$\exists$e[PEEL(e) $\wedge$ Ag(e) = m $\wedge$ Th(e) $\in$ *APPLE $\wedge$ |Th(e)| = 3$\wedge$Th(e) = x])

(G&L style: see their (48))

    c. (THE)[λX. X apple(s) $\wedge$ m peeled 3[apple parts of X]]

(E&G style: see their (46c))

Shimoyama (1999) proposes an E-type analysis of Japanese IHRCs. In Shimoyama's analysis, the IHRC starts in the specifier of the matrix DP and moves at LF to adjoin to IP. In the position of N is a null pro-form of type $\langle e, t \rangle$ which gets its denotation from the utterance context via an assignment function. In D is the morpheme *-no*, which Shimoyama says essentially functions like 'the'. This D causes the maximal interpretation of the IHRC. This is demonstrated in (4). The assignment function comes to denote 'the set of apples that Mary peeled' and the morpheme *-no* generates something of type $\langle e \rangle$ including all the apples that Mary peeled. This is the denotation given in (3a).

(4)
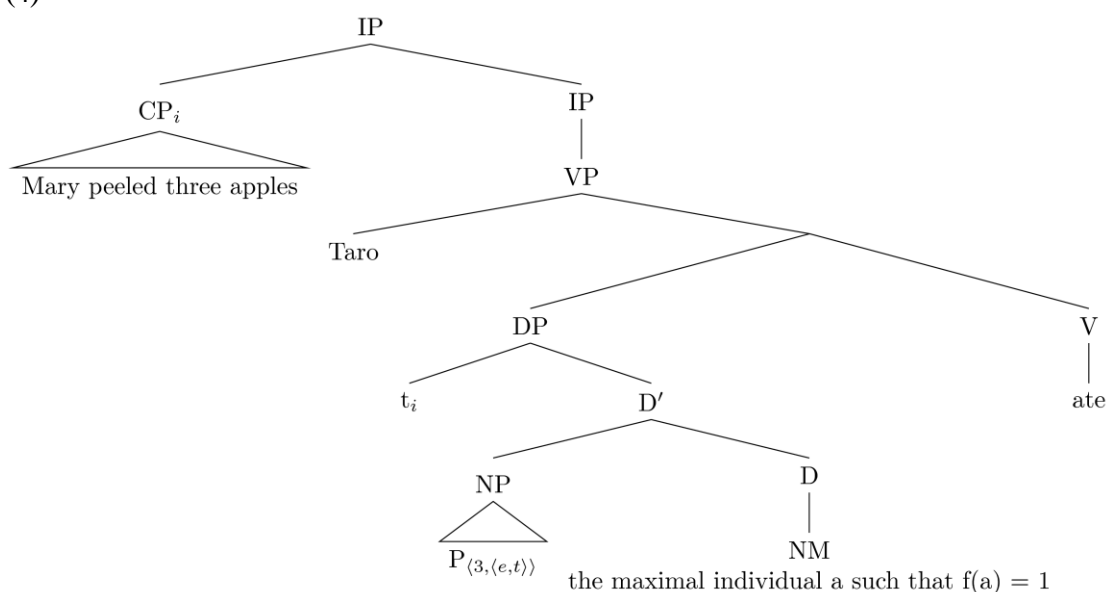
Grosu and Landman (2012), on the other hand, incorporate a projection, Choose Role, which has an

operator ChR that abstracts over a salient theta role of the IHRC verb phrase. The specifier of ChRP has an additional operator that moves to the specifier of CP and abstracts over the identified head at the CP level. The ChR operator functions to capture Kuroda's (1992) Relevancy Condition that had been identified in Japanese. The operator that moves to SpecCP serves to both abstract over the variable of the head and to capture the CNPC sentitivity of Japanese IHRCs. The sigma operator generates the maximal interpretation. This results in the denotation in (3b).

Erlewine and Gould (2016) offer a very different analysis that aims to capture not only IHRCs, but also externally headed and doubly headed relative clauses. Their analysis uses the Copy Theory of movement and late-merger of relative clauses to copy the full DP head. The relative clause CP merges with the NP of the copied DP. Trace conversion (Fox 2002) and Inverse trace conversion (Erlewine, 2014)—both of which involve abstraction and determiner replacement— cause the two DP copies to be realized distinctly.   Determiner replacement switches one quantifier for 'the'. Trace conversion changes the quantifier for the lower copy and Inverse trace conversion changes the quantifier of the higher copy. This 'the' that replaces the quantifier, combined with maximal informativeness semantics, generates the maximal interpretation. A principle called Minimize Mismatch causes the quantifier to be pronounced in the position corresponding to where it appears at LF. Since we are focusing on IHRCs with internally quantified heads, this means that we are focusing on inverse trace conversion—which leaves the relative clause internal quantifier unchanged. Following this derivation for example (1), we get the derivation in (3c).

The subset relation in the denotation is meant to capture the "Salient set" interpretation Erlewine and Gould (2016) identify in Japanese IHRCs. They report that some speakers do not allow this reading. Presumably, for those speakers the subset relation in this denotation would be 'equal to' instead. The subset reading has not been found in Yŭn Shan IHRCs, so I will not discuss this phenomenon further.

This maximal interpretation has been assumed or asserted for IHRCs in the majority of languages investigated, Lakhota being a notable exception (Williamson 1987). For Lakhota, the claim is that the presence of overt definite and indefinite articles is what allows for the non-maximal interpretations of some internally headed relative clauses (Watanabe 2004). Since Yŭn Shan does not have overt definite and indefinite articles, this analysis cannot be extended to the Yŭn Shan case. The next section explores Yŭn Shan IHRCs in more detail and proposes an analysis that can account for the non-maximal interpretation of these IHRCs.

4. Yŭn Shan Relative Clauses

Yŭn Shan is an SVO, classifier language.[3] This language has post-nominal relative clauses, as in (7). As (7) shows, quantifiers modifying the head at the matrix clause level are construed in the matrix clause. Thus, *màmɔ̂ săam hwí* 'three apples' in (7) specifies only the number of apples eaten, not the number of apples peeled.

---

[3] While it is still an open question about whether other varieties of Shan, as are found in Shan state, have IHRCs (see Section 5 for discussion of this), other SVO languages do have IHRCs (such as, Gur languages (Hiraiwa 2005)). Additionally, IHRCs have been reported in at least some dialects of Karen (Tibeto-Burman)—another SVO language spoken in Karen State, Myanmar (Naw Hsar Shee 2008).

▷ **Yŭn Shan**:

(7) Nan Lĭ cĭn pĕn [**màmɔ̂ sǎam hwɨ́**   ʔǎn   Saj   Kham pɤ̀k   nâj].
   Nan Li eat up apple three CL.RND COMP Saj   Kham peel   this
'Nan Li ate up three apples that Saj Kham peeled of which there are three.'
         • Apples S.K. peeled: 3 or more apples
         • Apples N.L. ate: 3 peeled apples

Internally headed relative clauses are also available. These and their externally headed counterparts are sensitive to CNPC islands. Unlike other definite article-less languages, the IHRCs are not obligatorily definite or maximalizing. This non-maximal interpretation is also available when the head is a bare noun, as in (8).

(8) Nan Lĭ khaj cĭn [ʔǎn   Saj   Kham tĕ   lâaŋ **màmɔ̂** nâj]. Mán khaj cĭn hwí.
   Nan Li want eat COMP Saj Kham IRR wash apple this   3 want eat CL.RND
'Nan Li wants to eat apples that Saj Kham will wash. She wants to eat one.'

(Moroney 2018: (17))

The internal head can be modified by quantifiers meaning 'half' or 'all' in addition to numerals, as shown in (9). These quantifiers are different from the numerals in that they do not ever appear with a classifier.

(9) Nan Lĭ cĭn pĕn [ʔǎn   Saj   Kham pɤ̀k   **màmɔ̂ mɤmót/khɯɯŋ**   nâj].
   Nan Li eat up COMP Saj   Kham peel   apple all/half   this
'Nan Li ate up apples from the all/half of them that Saj Kham peeled.'
         • Apples S.K. peeled: all/half the apples in the context
         • Apples N.L. ate: some of the peeled apples

This section shows that post-head relatives are available in Yŭn Shan in addition to internally headed relative clauses. Yŭn Shan IHRCs display a non-maximal interpretation whether the noun is bare, modified by a numeral, or modified by a quantifier like 'all' or 'half'. The following section will assess whether the IHRC analyses for Japanese can apply to the Yŭn Shan case.

5. Analysis

Analyses that assume a definite IHRC interpretation cannot be applied directly to this new data since we want to allow for a possible non-definite/maximal interpretation. (10a-10c) are possible IHRC interpretations for (2) adapted from (3a-3c) to exclude the definiteness operation. The IHRC's subject has also changed from m (Mary) to sk (Saj Kham). Note: (10a) is the adaptation of S style (3a), (10b) is the adaptation of G&L style (3b), and (10c) is the adaptation of E&G style (3c):

▷ **Yŭn Shan**:
(10) a. $\lambda x \in De$. x is apples sk peeled
     b. $\lambda x.\exists e[PEEL(e) \wedge Ag(e) = sk \wedge Th(e) \in {}^*APPLE \wedge |Th(e)| = 3 \wedge Th(e) = x]$
     c. $[\lambda X.X$ apple(s) $\wedge$ sk peeled 3[apple parts of X]]

With the definite operation removed, Grosu and Landman's (2012) analysis would give the interpretation in (10b). The problem with this is that each x in the set must have the measure 3, but the

matrix clause verb does not actually need to apply to all three peeled apples in Yŭn Shan. We want it to be possible for only 1 or 2 apples to be eaten.[4] Erlewine and Gould's (2016) analysis has a similar problem, shown in (10c). Each X described would have to contain at least 3 apples. The interpretation of Shimoyama's (1999) with the definiteness operation removed, shown in (10a), does better since it would not make reference to the number of apples peeled at level of the E-type pronoun, but since the LF of the IHRC was interpreted separately, that information is not lost (i.e., we still know only three apples were peeled).

In Shimoyama's (1999) analysis, the IHRC would adjoin at LF to the IP. In the base position of the IHRC is a free variable that receives its denotation from an assignment function in the utterance context. The IHRC supplies the salient property. Instead of having something like Japanese *-no* performing a definiteness operation at D, either there would be no D, or the null D itself would generate an existential or definite meaning. Then, the argument of the matrix clause would be something of type ⟨e, t⟩, that could be handled like any bare noun in the language. This is not a stretch since Shan, like Mandarin, can have bare nouns as arguments.

Another alternative is an unselective binding analysis, which has been proposed for nonmaximal IHRC languages like Lakhota (Watanabe 2004). The problem is that this analysis relies on the presence of overt determiners in the language, which Shan lacks, and predicts no IHRC island-sensitivity, which Shan has, so this type of analysis would require that there are covert definite and indefinite determiners that unselectively bind the internal head of IHRCs.

My proposal, building on Shimoyama's (1999) analysis, is that the IHRC moves at LF to a higher projection. However, I claim that the higher position that it moves to is a topic/left dislocation position, which is independently found in the language. As (11) shows, this topic position can be used for a partitive structure where the topic is 'her four children' (from a story about a dog and her puppies), and subsequently two of those children are described one way and the other two another way.

(11) | luk mán sì   tŏ   nâj | sǒng tŏ   nâj | waaŋaaj | pǐŋ mɛ | mán |
     |---|---|---|---|---|
     | child 3   four CL.ANIM this | two CL.ANIM   this | obedient | like mother | 3 |
     | ʔăn   sǒng tŏ   nâj | hâaj hějâw mán khóp pɤn | | | |
     | COMP two CL.ANIM this | bad and   3   bite   others | | | |

'(Of) her four children, two are obedient like their mother, (and) two are bad and they bite people.'

This position is usually filled by a noun or a dependent clause. As further evidence that relative clauses can move to this position, (12) shows an IHRC in the topic position. The structure in brackets looks the same as the IHRC in (2). The interpretation is similar to (2) in that the internal quantifier *màmɔ̂ sǎam hwí* 'three' indicates how many apples were peeled. The matrix clause quantifier *mómót* 'all' indicates how any apples were eaten. (13) is like (12) except the relative clause is missing the complementizer *ʔăn*, which is sometimes optional, and there is no matrix clause quantifier, giving (13) the same interpretation as (2).

---

[4] During the question period, the question was raised as to whether the non-maximal interpretation comes about from the verb *eat*. This is not a problem since the non-maximal interpretation is available with other verbs.

(12) [ʔăn   Saj Kham pɤ̀k **màmɔ̂ săam hwɨ́**   nâj]   Nan Lĭ cĭn pĕn mómót.
     COMP Saj Kham peel apple   three   CL.RND this   Nan Li eat up   all
'Nan Li ate up three apples that Saj Kham peeled.'
        • Apples S.K. peeled: 3 apples
        • Apples N.L. ate: all 3 peeled apples

(13) [Saj Kham pɤ̀k **màmɔ̂ săam hwɨ́**   nâj]   Nan Lĭ cĭn pĕn.
     Saj Kham peel apple   three   CL.RND this   Nan Li eat up
'Nan Li ate up apples that Saj Kham peeled of which there are three.'
        • Apples S.K. peeled: 3 apples
        • Apples N.L. ate: some of the peeled apples

Further support for this kind of analysis comes from the fact that for relatives that act as the subject of the matrix clause, there is often an overt realization of the pronominal form. This can be seen in (14).

(14) [ʔăn   háw hăn lik   nâj]   **mán** lĕŋ.
     COMP   1   see book this   3   red
'The book that I saw is red.' ('The book that I saw, it is red.')

Interestingly, even in a dialect of Shan that does not have internally headed relative clauses, a structure like (12) and (13) is possible, as shown in (15).[5] Like Yŭn Shan, Southern Shan can have some quantificational material in the matrix clause that indicates how much of the topic noun serves as an argument of the matrix clause, as in (16).

▷ **Southern Shan**:
(15) [ʔăn   tsáaj Khám pɔ̀k **màak-moŋ   sì   hòj**   nân]   Náaŋ ʔɔ̀n kĭn   pɛt   jâw.
     COMP Mr.   Kham peel fruit-mango four CL.RND   that   Ms.   Orn   eat   waste PERF
'Ms. Orn ate mangoes that Mr. Kham peeled of which there are four.'
        • Mangoes Mr. K. peeled: 4 mangoes
        • Mangoes Ms. O. ate: some peeled mangoes

(16) [ʔăn   tsáaj Khám pɔ̀k **màak-moŋ   sì   hòj**   nân]   Náaŋ ʔɔ̀n
     COMP Mr.   Kham peel fruit-mango four CL.RND   that   Ms.   Orn
kĭn   **sɔ̆ng hòj**   jâw.
eat   two CL.RND   PERF
'Ms. Orn ate two of the mangoes that Mr. Kham peeled of which there are four.'
        • Mangoes Mr. K. peeled: 4 mangoes
        • Mangoes Ms. O. ate: 2 peeled mangoes

(17) shows that the same non-maximal interpretation can be found in Southern Shan when verbs other than 'eat' are used.

---

[5] What I am calling "Southern Shan" is the dialect spoken in the southern part of Shan State. The speakers call themselves *Tái* or *Tái Lŏng*. This seems to be the best documented variety of Shan. Even within Southern Shan there is variation that has not been well described. This data comes from a speaker from Keng Tawng City in Southern Shan State, Myanmar, whom I have been working with since January 2018.

(17) [ʔăn   tsáaj Khám pɔk **màak-moŋ sì   hòj**   nân] Náaŋ ʔɔ̀n sɔ́j   jâw.
     COMP Mr. Kham peel fruit-mango   four CL.RND   that Ms. Orn cut   PERF
'Ms. Orn cut mangoes that Mr. Kham peeled of which there are four.'
        • Mangoes Mr. K. peeled: 4 mangoes
        • Mangoes Ms. O. cut: some peeled mangoes

Both varieties of Shan have a topic/left dislocation position available. The difference here between Yŭn Shan and Southern Shan seems to be that in Southern Shan internally headed relative clauses cannot raise from object position at LF, meaning that a structure like (2) is not possible.

      I have proposed that Yŭn Shan IHRCs are moved at LF to a higher topic position and that following Shimoyama (1999), the argument position in the matrix clause contains a pro-form which gets its interpretation from an assignment function and generates something of type ⟨e, t⟩. This structure can be seen in (18).

(18)

What has not yet been discussed is the internal structure of the internally headed relative clause. One piece of evidence suggesting that Yŭn Shan IHRCs are relative clauses, is their island sensitivity, as shown in (19). This suggests that there is movement going on inside the relative clause.

(19) *[ʔăn   Nan Lĭ waa kăn   táŋhen [ʔăn   **kón**   ʔàan **lik**   nâj]] mán lĕŋ.
     COMP Nan Li   spoke together with   COMP person read   book this 3   red
Intended: 'The book that Nan Li spoke with the people who read (it) is red.'

                                                       (Moroney 2018: (16))
As (20) shows, it is not merely the case that multiple embeddings are prohibited.

(20) [ʔăn   Nan Lĭ cɤk [ʔăn   **kón**   sû lik   nâj]] mán kêŋ.
     COMP Nan Li   like COMP person buy   book this 3   smart
 'The person that Nan Li likes who bought the books is smart.'

If there is no IHRC internal raising going on it is harder to predict why (19) is ungrammatical and (20) is grammatical. Perhaps, this issue is that for (19), it is not possible to identify the topic since there are two. Another possibility, which was raised during the question period of this talk, is that (19) is simply more difficult to process, and that by reducing the processing load by replacing arguments with indexical expressions it would be possible to show that this construction was more acceptable than originally thought. Unfortunately, I cannot collect new Yŭn Shan data at the moment.

An alternative is to have—in addition to the IHRC being construed as a topic—something raising that causes the IHRC in the topic position to denote the noun phrase that serves as its head. Since the more deeply embedded IHRC in (19) has a different head than the less deeply embedded one, an island violation occurs.

Given that this analysis is relies on a kind of anaphora, it may seem peculiar that this anaphora generates an ⟨e, t⟩ type argument. While we generally think of anaphora as referring back to something maximally, bare nouns do not always have to refer anaphorically to the maximal entity, as Gillon (2015) shows for Inuttut, shown in (23). Here, when the bare noun is used anaphorically the default interpretation is maximal (23b), but that maximal interpretation is cancelable, as (23c) shows.

(23) a. Tallimat   adlait amma   **sâksit tuttuit**   napâttulinii.
         five   bears and   six   caribou.PL forest.Loc
      'There were 5 bears and 6 caribou in the forest.' (Gillon 2015: (42))
      b. **Tuttuit**   Kukijaka
         caribou.PL shoot.1>3
      'I shot (and killed) the caribou.' (all 6, not 5/6)"
      c. **Illangit**   Kimâjut
         some   flee.3
      'Some escaped.' (therefore less than 6)

Yŭn Shan seems to allow non-maximal nominal anaphora, as demonstrated in (24). The noun măa 'dog' in the second sentence is referring to the five dogs described in the first sentence, yet the interpretation can be non-maximal. The *nâj* that appears here and with relative clauses might be functioning as a topic or focus marker rather than simply as a demonstrative.

(24) a. **Măa haa   tŏ**   táŋhen mjáw săam tŏ   khóp kăn.
         dog   five CL.ANIM and   cat   three CL.ANIM   fight   together
      'Five dogs and three cats were fighting.'
      b. Pejâwne **măa nâj**   ʔɛ̀n pĕn
         then   dog this   run off
      'Then, dogs ran away.' [Consultant comment: Could be all dogs or some that ran away.]

6. Conclusion

This paper offers an E-type analysis to account for the non-maximal interpretation available for IHRCs in Yŭn Shan and discusses the connection this sort of analysis has with the types of anaphora found within a language. I have proposed that non-maximal Yŭn Shan IHRCs cannot fully be accounted for using any of the previous analyses of Japanese IHRCs. An E-type analysis that allows for a non-maximal interpretation can capture the data, though we might still want to say that there is still movement within the relative clause. The Shan data given here show an overt realization

of the pronoun left behind when the IHRC is moved to a higher position in the clause. The contrast between the Yǔn Shan and Southern Shan data might show a language at different points in the development of internally headed relative clauses. For Southern Shan, what looks like an IHRC can only appear in the topic/left dislocation position. In Yǔn Shan, the IHRC can appear in the original argument position.

Bibliography

Bogal-Allbritten, Elizabeth, and Keir Moulton. 2017. "Navajo in the typology of internally-headed relatives." Edited by Dan Burgdorf, Jacob Collard, Sireemas Maspong and Brynhildur Stefánsdóttir. Semantics and Linguistic Theory (SALT). College Park, MD: LSA and CLC Publications. 700–720.

Erlewine, Michael Yoshitaka. 2014. "Movement out of focus." Cambridge, MA: Massachusetts Institute of Technology PhD dissertation.

Erlewine, Michael Yoshitaka, and Isaac Gould. 2016. "Unifying Japanese relative clauses: copy-chains and context-sensitivity." Glossa (Ubiquity Press) 1 (1): 1-40.

Fox, Danny. 2002. "Antecedent-contained deletion and the copy theory of movement." Linguistic Inquiry 33: 63–96. doi:10.1162/002438902317382189.

Gillon, Carrie. 2015. "Investigating D in Languages With and Without Articles." In Methodologies in semantic fieldwork, by M. Ryan Bochnak and Lisa Matthewson, 175-203. Oxford University Press.

Grosu, Alexander , and Koji Hoshi. 2018. "On the unified analysis of three types of relative clause construction in Japanese, and on the "salient reading" of the internally headed type. A reply to Erlewine & Gould (2016)." Glossa 3 (1): 1–16. doi:10.5334/gjgl.577.

Grosu, Alexander, and Fred Landman. 2012. "A quantificational disclosure approach to Japanese and Korean internally headed relatives." Journal of East Asian Linguistics (Springer) 21 (2): 159-196.

Hastings, Rachel Elizabeth. 2004. "The syntax and semantics of relativization and quantification: The case of Quechua." Cornell University PhD dissertation.

Hiraiwa, Ken. 2005. "Dimensions of symmetry in syntax: agreement and clausal architecture. ." Massachusetts Institute of Technology PhD dissertation.

Hoshi, Koji. 1995. "Structural and Interpretative Aspects of Head-Internal and Head-External Relative Clauses." University of Rochester PhD dissertation.

Kim, Min-Joo. 2009. "E-type anaphora and three types of kes-construction." Natural Language and Linguist Theory 27: 345-377. doi:10.1007/s11049-009-9065-5.

Kitagawa, Chisato. 2019. "The pro-head analysis of the Japanese internally-headed relative clause." Glossa 4 (1): 1-31. doi:10.5334/gjgl.857.

Kuroda, Sige-Yuki. 1992. Japanese syntax and semantics: Collected papers. Dordrecht: Kluwer. doi:10.1007/978-94-011-2789-9.

Moroney, Mary. 2018. "Interpretation of internally-headed relative clauses in Shan." Edited by Karee Garvin, Noah Hermalin, Myriam Lapierre, Yevgeniy Melguy, Tessa Scott and Eric Wilbanks. Proceedings of the 44th Berkeley Linguistics Society Annual Meeting (BLS). Berkeley, CA: Berkeley Linguistics Society. 197-212.

Naw Hsar Shee. 2008. "A Descriptive Grammar of Geba Karen." Payap University MA Thesis.

Shimoyama, Junko. 1999. "Internally headed relative clauses in Japanese and E-type anaphora." Journal of East Asian Linguistics 8 (2): 147-182.

Williamson, Janis. 1987. "An indefiniteness restriction for relative clauses in Lakhota." In

The Representation of (In) definiteness, 168-190.