

## Remnant Movement in Tagalog Relative Clause Formation

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### 1. Introduction

There is considerable controversy surrounding Kayne's (1994) proposal for the derivation of head-final relative clauses, where the head nominal moves from inside the clause to [Spec, CP], and the remnant clause then fronts to [Spec, DP].

(1) [DP [TP...*t*<sub>NP</sub>...]] [D' [CP NP [C' *t*<sub>TP</sub> ]]]

Much skepticism has been voiced regarding the empirical support for these movements from languages that have head-final relative clauses. Murasugi (2000) and Fukui and Takano (2000), among others, cite evidence against movement of the head NP in the derivation of head-final relative clauses in Japanese. One argument they invoke (citing Kuno 1973) is that Japanese relative clauses do not exhibit island effects, as shown in (2). Movement of the head nominal from the gap inside the more deeply embedded relative clause would violate the Complex NP Constraint. The grammaticality of this example suggests that this movement has not taken place.

(2) [DP[[DP[ *e*<sub>i</sub> *e*<sub>j</sub> kiteiru] [yoohuku<sub>j</sub>]]-ga yogoreteiru] [[*sinsi*<sub>i</sub>]]  
wearing-is suit-NOM dirty-is gentleman

'the gentleman who [the suit that he is wearing] is dirty'

This does not, however, rule out an Antisymmetric analysis for head-final relative clause derivation entirely. Honda (2002) proposes an analysis of Japanese relative clauses where the head NP is base-generated in a topic position to the left of TP and coreferent with a null pronominal inside the clause. This TP then fronts to [Spec, DP] to derive the head-final word order.

- (3) [DP [TP Taro-ga tabeta *pro*<sub>i</sub>] [D' [TopP ringo *t<sub>TP</sub>*]]]  
 Taro-NOM ate apple  
 ‘the apple that Taro ate’

Left open at this point is still the question of whether the relative TP attains its prehead position by fronting. What I will explore in this squib is empirical evidence in favor of such a fronting analysis. Material from inside the clause stranded after the relative head could constitute such evidence, acting as a flag to indicate the original position of the fronted clause. Unfortunately, such evidence is not available for Japanese. The relative head must follow all material in the clause.

- (4) \*tabeta *ringo* Taro(-ga)  
 ate apple Taro-NOM  
 ‘the apple that Taro ate’

There are languages, however, that do allow this type of stranding in head-final relative clauses. The Austronesian language Tagalog is one such language. I will argue in this squib that stranding in Tagalog relative clause formation constitutes evidence that TP-fronting is involved in the derivation.

## 2. Relative Clauses in Tagalog

Tagalog has both head-initial and head-final relative clauses<sup>i</sup>.

(5) *libro-ng*      *b-in-ili*      *ni*      *Maria*  
 book-LK      -PERF-buy      ERG      Maria  
 ‘the book Maria bought’

(6) *b-in-ili*      *ni*      *Maria-ng*      *libro*  
 -PERF-buy      ERG      Maria-LK      book  
 ‘the book Maria bought’

Under the Antisymmetric analysis, derivation of the head-initial type would simply require moving the head NP to [Spec, CP].

(7) [DP [CP book [TP Maria bought  $t_{book}$  ]]]

Derivation of the head-final type additionally involves fronting of the remnant TP to [Spec, DP].

(8) [DP [TP Maria bought  $t_{book}$ ] [D' [CP book [C'  $t_{TP}$  ]]]]

The traditional adjunct analysis of relative clauses (Chomsky 1977, Safir 1986, among many others) can also derive the correct word orders for (5) and (6), if two distinct structures are posited, one with the clause adjoined to the right of the relative head and one with the clause adjoined to the left.

(9) [NP book<sub>i</sub> [CP Op<sub>i</sub> [TP Maria bought  $t_{Op}$  ]]]

(10) [NP [CP Op<sub>i</sub> [TP Maria bought  $t_{Op}$  ]] book<sub>i</sub>]

However, there is empirical evidence which favors the TP fronting analysis. The primary evidence I discuss in this squib is the stranding of material from inside TP before it moves to [Spec, DP]. Specifically, a PP can be stranded to the right of the head nominal in a Tagalog head-final relative clause.

(11) i-b-in-igay                      ng        babae-ng        kendi    sa        bata  
 APP-PERF-give        ERG    woman-LK    candy P        child  
 'the candy the woman gave to the child'

The adjunct analysis would have difficulty accounting for this word order, since the relative head would be predicted to be in final position and not the PP. The TP

fronting analysis, on the other hand, can provide a straightforward account of the word order. The PP can first be scrambled. Then the head NP can move into [Spec, CP] and the remnant TP front to [Spec, DP].

(12) [XP [PP to child] [TP woman gave candy  $t_{PP}$  ]]

(13) [CP [NP candy] [XP [PP to child] [TP gave woman  $t_{NP}$   $t_{PP}$  ]]]

(14) [DP [TP gave woman  $t_{NP}$   $t_{PP}$  ] [CP [NP candy] [XP [PP to child]  $t_{TP}$  ]]]

In what follows, I show that this type of stranding is possible just when scrambling is possible, strongly supporting the TP fronting analysis of prehead relative clauses.

### 3. Constraint on XP Stranding in Tagalog Relative Clauses

A'-movement in Tagalog is highly constrained, as it is in a great number of Austronesian languages (Nakamura 1994, Pensalfini 1995, Chung 1998, among many others). Only absolutes<sup>ii</sup> are eligible to undergo relativization, topicalization, clefting, and wh-question formation. Hence, a relative clause formed on the theme of a transitive clause in (15) is grammatical, but (16), formed on the agent of the same transitive clause is not.

(15) *libro-ng*        *b-in-ili*        *ni*        *Maria*  
           book-LK        -PERF-buy    ERG    Maria  
           'the book Maria bought'

- (16) \**tao*-ng      b-in-ili      ang    libro  
 person-LK    -PERF-buy    ABS    book  
 ‘the person who bought the book’

Aside from this restriction, PPs are allowed to move to preverbal position in Tagalog, where they typically receive a focus interpretation.

- (17) I-b-in-igay                  ng      babae ang    kendi *sa*    *bata*.  
 APP-PERF-give      ERG    womanABS    candy P      child  
 ‘The woman gave candy to the child.’

- (18) *Sa*    *bata*    i-b-in-igay                  ng      babae ang    kendi.  
 P      child    APP-PERF-give      ERG    womanABS    candy  
 ‘The woman gave the candy *to the child*.’

Other non-absolutive arguments, in contrast, are not able to undergo scrambling. In the ditransitive in (19), the goal is licensed as absolutive of the clause by the applicative affix on the verb. The theme is demoted to oblique status. This non-absolutive theme cannot be scrambled, as shown in (20).

- (19) B-in-igy-an                  ng      babae                  *ng*    *kendi* ang    *bata*.  
 -PERF-give-APP      ERG    woman                  OBL    candy ABS    child  
 ‘The woman gave the child candy.’

- (20) \**Ng kendi b-in-igy-an ng babae ang bata.*  
 OBL candy -PERF-give-APP ERG woman ABS child

The same pattern can be observed in stranding in relative clauses. As mentioned above, only the absolutive can be the head NP. But a PP originating in the prehead clause can also appear to the right of the head nominal.

- (21) *i-b-in-igay ng babae-ng kendi sa bata*  
 APP-PERF-give ERG woman-LK candy P child  
 ‘the candy the woman gave to the child’

As explained above, this can be analyzed as follows. After scrambling the PP out of TP, the remnant TP can front to [Spec, DP], leaving the PP behind, as shown in the previous section.

- (22) [DP [TP gave woman  $t_{NP}$   $t_{PP}$  ] [CP [NP candy] [XP [PP to child]  $t_{TP}$  ]]]

In contrast to this, oblique objects cannot be stranded in a relative clause.

- (23) \**b-in-igy-an ng babae-ng bata ng kendi*  
 -PERF-give-APP ERG woman-LK child OBL candy  
 ‘the child to whom the woman gave candy’

The derivation of (23) is nearly identical to (22). The relative head is, correctly, the absolutive nominal of the clause, the goal *bata* “child” being licensed by the applicative suffix on the verb. The only difference is that in (23) the scrambled XP is the oblique object *kendi* “candy” and not a PP. The inability of obliques to undergo scrambling can straightforwardly account for the ungrammaticality.

(24) \* $[_{DP} [_{TP} \text{gave woman } t_{NP} t_{DP} ] [_{CP} [_{NP} \text{child}] [_{XP} [_{DP} \text{candy}] t_{TP} ]]]$

Interestingly, head-initial relative clauses formed on goal absolutives with oblique objects in situ are perfectly grammatical. The head initial version of (23) is shown in (25), where the oblique object appears in situ inside the clause. This is completely consistent with the analysis being developed here. The oblique nominal need not move, and therefore no ungrammaticality will result.

(25) *bata-ng*            [b-in-igy-an            ng    babae *ng*    *kendi*]  
 child-LK        -PERF-give-APP    ERG   womanOBL   candy  
 ‘the child to whom the woman gave candy’

This section has shown a correlation between scrambling in declarative clauses and stranding in relative clauses. This correlation is explained naturally by analyzing stranding as the result of scrambling followed by remnant movement, as proposed in the



remnant TP fronting analysis of head-final relative clause derivation developed in this paper.

#### 4. Remnant Embedded TP Movement in Tagalog

In addition to relative clauses, Tagalog exhibits other cases of PP scrambling followed by remnant TP fronting. Non-finite complement clauses in Tagalog may appear in their base positions clause-finally or may move to a position in the matrix clause between the matrix verb and agent.

(26) Nag-ba-balak                      si      Maria-ng      *mag-aral*      sa      UP.

PERF.AP-RED-plan                      ABS      Maria-LK      AP-study      P      UP

‘Maria is planning to study at the University of the Philippines.’

(27) Nag-ba-balak                      na      *mag-aral*      sa      UP      si      Maria.

PERF.AP-RED-plan                      LK      AP-study      P      UP      ABS      Maria

‘Maria is planning to study at the University of the Philippines.’

I analyze this as movement of the embedded clause to a position above the matrix agent.

(28) [TP plan [XP [TP study at UP ] [vP Maria [vP *t<sub>plan</sub>* *t<sub>TP</sub>* ]]]]



## 5. Head-final vs. Head-internal

At this point, an objection might be raised that what I call head-final relatives might actually be head-internal relatives. Coincidentally, the head NP in (32) appears in the same position it would in the corresponding declarative clause, shown in (33)

(32) i-b-in-igay            ng    babae-ng    *kendi* sa    bata  
APP-PERF-give    ERG   woman-LK    candy P    child  
'the candy the woman gave to the child'

(33) I-b-in-igay            ng    babae        *ang kendi* sa    bata.  
APP-PERF-give    ERG   woman        ABS   candy P    child  
'The woman gave the candy to the child.'

However, if movement were not involved in the derivation of (32), it would be difficult to account for the constraint discussed in section 3. As argued in section 3, remnant movement offers an explanation for the differences in grammaticality between (34) and (35).

(34) i-b-in-igay            ng    babae-ng    *kendi sa*    *bata*  
APP-PERF-give    ERG   woman-LK    candy P    child  
'the candy the woman gave to the child'

- (35) \*b-in-igy-an                    ng    babae-ng    bata    ng    *kendi*  
 -PERF-give-APP    ERG    woman-LK    child    OBL    candy  
 ‘the child to whom the woman gave candy’

An internal head analysis would predict (35) to be a possible relative clause, since the corresponding declarative clause is grammatical.

- (36) B-in-igy-an                    ng    babae    ang    bata    ng    *kendi*.  
 -PERF-give-APP    ERG    womanABS    child    OBL    candy  
 “The woman gave the child candy.”

This indicates that relative clauses like (34) should not be analyzed as head-internal relative clauses, since a non-movement analysis cannot account for the grammaticality distinctions in the different cases of stranding.

A further point to be made here is that Tagalog does, in fact, have internally headed relative clauses, and they differ structurally from head-final relatives. First, the position of the head is different, appearing between the verb and agent.

- (37) b-in-ili-ng                    *libro*    ni    Maria  
 -PERF-buy-LK                    book    ERG    Maria  
 “the book Maria bought”

Secondly, “stranding” evidence indicates that the internal relative head does not move outside of the clause. For example, the internally headed version of (35) is grammatical, where the relative head appears in immediate post-verbal position and is followed by the ergative and oblique nominals<sup>iii</sup>.

- (38) b-in-igy-an            na    *bata*   ng    babae            ng    kendi  
 -PERF-give-APP    LK    child    ERG    woman            OBL    candy  
 “the child to whom the woman gave candy”

I have shown in section 3 that oblique objects cannot be scrambled. Ergative agents are also unable to undergo scrambling in declarative clauses.

- (39) B-in-ili            *ni*    *Maria*   ang    libro.  
 -PERF-buy    ERG    Maria   ABS    book  
 “Maria bought the book.”

- (40) \**Ni*    *Maria*   b-in-ili            ang    libro.  
 ERG    maria   -PERF-buy    ABS    book  
 “Maria bought the book.”

The fact that internally headed relative clauses like (37) and (38) are grammatical indicates that TP fronting is not involved in their derivation. This is because the TP fronting analysis would force scrambling of the ergative and oblique arguments out of the

clause, which would result in ungrammaticality. Aldridge (2002a) proposes that internally headed relative clauses in Tagalog are not derived through remnant TP fronting. Rather, the head remains inside the clause and receives its interpretation by being bound by an external operator<sup>iv</sup>.

(41) [CP Op<sub>i</sub> [TP bought [FP book<sub>i</sub> [VP Maria [VP *t<sub>bought</sub> t<sub>book</sub>* ]]]]]

To recapitulate, the discussion in preceding sections has shown that head-final relative clauses involving stranding are grammatical only in those cases where the stranding is the result of licit scrambling, i.e. PP scrambling, and are ungrammatical in cases involving illicit scrambling. The discussion in section 3 focused on oblique object stranding. For the sake of completeness, let me point out that stranding of ergative agents is also not permitted. (42) is a variant of (35) where the agent is stranded instead of the oblique object. Not surprisingly, it is ungrammatical and provides further evidence that stranding in head-final relative clauses correlates with the possibilities for scrambling.

(42) \*b-in-igy-an                      ng      kendi-ng      *bata*      ng      babae  
       -PERF-give-APP      OBL      candy-LK      child      ERG      woman  
       “the child to whom the woman gave candy”

Head-internal relative clauses, on the other hand, do not exhibit such movement constraints. Oblique objects and ergative agents, which are unable to scramble in declarative clauses, can both appear to the right of the relative head in an internally headed relative clause. It should be clear from this fact that internally headed relative clauses are not derived through movement and are therefore structurally distinct from head-final relatives.

## **6. Conclusion**

This squib has argued for a TP fronting derivation of head-final relative clauses. Chief evidence for this analysis comes from stranding in relative clause formation in the Austronesian language Tagalog. I have shown a clear correlation between stranding and scrambling in this language, on which basis I have concluded that stranding in relative clauses is also a case of scrambling, followed by fronting of the remnant clause.

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<sup>i</sup> This squib focuses on the structural properties of Tagalog relative clauses. One anonymous reviewer has expressed an interest in the pragmatic differences among the various word orders taken up in this paper. Unfortunately, discussion of this topic is beyond the scope of the current study. I will only mention in passing that one native speaker consultant has suggested that there might be a difference in information structure. Leftmost material in a Tagalog phrase or clause tends to receive a focus interpretation, while rightward material tends to be backgrounded.

<sup>ii</sup> By those who take these languages to be accusative, the grammatical role “absolutive” is generally referred to as “subject”. Following my earlier work (Aldridge 1999, 2001, 2002b), I treat Tagalog as an ergative language. Earlier ergative analyses of Philippine languages include De Guzman (1988), Gertds (1988), Payne (1982).

<sup>iii</sup> One anonymous reviewer has questioned the use of separate glosses “ERG” and “OBL” for the case marker “ng” (pronounced “nang”). The two markers in Tagalog are homophonous; the glosses I use here reflect the differences in function. For discussion of the different functions, the reader is referred to Schachter (1976), De Guzman (1988), Kroeger (1993) Maclachlan & Nakamura (1997), among others. It may also be noteworthy to mention that these case markers are not homophonous in many other Austronesian languages, including the Philippine languages Cebuano and Ilokano.

<sup>iv</sup> This analysis is inspired primarily by Basilico (1996), who proposes that internally headed relative clauses are quantificational, the head functioning as a variable bound by an external operator. For concrete discussion of the variable status of the internal relative head in Tagalog, the reader is referred to Aldridge (2002a).