Relativization in Omagua: The role of pro

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In this paper I analyze a pattern of apparently headless relative clauses that I attribute to pro-drop in Omagua. The language only allows pro-drop in the case of third person objects and only allows headless relative clauses in a limited distribution. I argue that these two facts are expressions of the same restriction, and that headless relative clauses in Omagua are in fact internally headed by a null third person pronoun. This analysis has the benefit of providing coherency to two otherwise irregular patterns, as well as of showing how a given language might utilize its unique resources (in this case pro) to achieve a surface construction which may be achieved differently in other languages. This paper relies crucially on a Minimalist framework, as the Agree operation allows for feature matching between constituents in a derivation in a way that Government and Binding theory does not.

1 Introduction

This paper argues that apparent headless relative clauses in Omagua are in fact internally headed by pro, a null third person pronoun. Support for this claim is found in the distribution of pro in matrix clauses in Omagua, as well as in the subject requirement for non-nominalized clauses in the language.

Under my analysis, pro inherently bears absolutive case, and Omagua has a split-S alignment system, which can only be seen in nominalized clauses, where there is no subject requirement. I show that Omagua relative clauses are internally headed and behave as nominalized clauses. This analysis allows for coherency in Omagua grammar between two otherwise incoherent patterns.

1.1 Language and project background

Omagua is a nearly extinct Tupí-Guaraní contact language spoken in Peru. It is an isolating SVO language. Omagua exhibits nominative accusative alignment, and grammatical relations are encoded by word order so that in unmarked clauses, the subject of a transitive verb and the subject of an intransitive verb both precede the verb whereas the object of a transitive verb follows the verb. There is no morphological case in Omagua.

1.2 Restrictive relativization

Relativization strategies vary from language to language, as do the syntactic analyses these strategies motivate (e.g., Keenan and Comrie 1977 and Vries, 2002). Of particular relevance to Omagua relative clauses are analyses of headless relative clauses and those of internally headed relative clauses (IHRCs), both of which have an extensive literature (e.g., Cole, 1987 and Culy 1990). For the purpose of this paper, I look at restrictive relative clauses in Omagua, though non-restrictive relative clauses appear to be formed in the same manner.

Keenan and Comrie (1977, pp. 63-64) define a restrictive clause as, ‘ ... any syntactic object ... if it specifies a set of objects (perhaps a one-member set) in two steps: a larger set is specified, called the domain of relativization, and then restricted to some subset of which a certain sentence, the restricting sentence, is true. The domain of relativization is expressed in surface structure by the head NP, and the restricting sentence by the restricting clause, which may look more or less like a surface sentence depending on the language.’

Under this understanding of restrictive relative clauses, a relativized NP must first semantically combine with the CP of the restrictive relative clause and then with the D which selects for it from the matrix clause. Since the work of a restrictive relative clause is to pick out an individual from a subset of individuals, the set of individuals cannot be a DP because DPs are already individual denoting (Bhatt, 2001).

1.2.1 Internal structure of internally headed relative clauses

Several proposals for the internal structure of relative clauses have been put forward in the literature. For example, Cole (1987, p. 278) proposes the structures in Figures (1) and (2), for internally headed relative clauses in Imbabura Quechua, where Figure (1) shows the surface structure of such clauses, and Figure (2) the logical structure.

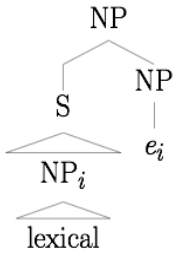


Figure 1: Internally headed relative clause SS (Cole, 1987 p. 278)

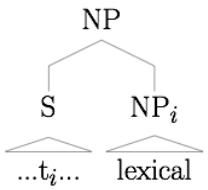


Figure 2: Internally headed relative clause LF (Cole, 1987 p. 278)

Under Cole's analysis of Imbabura Quechua relative clauses, what appear to be internally headed relative clauses are actually externally headed by a null pronoun, which allows Cole to unify a model of relativization for Imbabura Quechua, since the language also has externally headed relative clauses.

Culy (1990) adopts a version of Cole's structure for internally headed relative clauses, but allows coindexing to do the work of covert movement in his structure. Under Culy's analysis, features from the relativized head NP are allowed to percolate up to the clause external null pronoun which selects for the relative clause, and, by virtue of this feature percolation, bears the same index as the clause internal head.

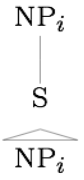


Figure 3: Internally headed relative clause (Culy, 1990 p. 94)

Basilico develops a similar structural analysis to Cole's, but argues that there is no movement out of the relative clause at logical form, and that overt or covert movement of the NP heading the relative clause is clause internal.

The case of Omagua is of particular interest for the LF structure of IHRCs put forward by Basilico since, if my analysis is correct, it is an example of a language which undergoes overt movement at SS rather than covert movement at LF, thus providing support for his analysis.

Following Gutiérrez-Bravo (2010), the values for the parameters which define the internal structure of relative clauses may vary from language to language. Thus, languages vary with respect to the relativization strategies they employ (e.g., gap vs. relative pronoun; external or internal head, etc.), and languages may employ more than one strategy. As such, it logically possibly that each of the different structures that has been put forward in this section could be correct for a particular language, and that the internal structure of a relative clause in Omagua might bear similarities to each these analyses without necessarily matching any one of them completely. In fact, the surface structure I propose for Omagua bears the strongest resemblance to the LF structure proposed by Basilico. However, the null elements I propose are in the spirit of Cole and the co-indexation mechanism I employ is in the spirit of Culy.

1.2.2 Internally headed relative clauses as nominalized clauses

An areal feature of South American languages is the nominalization of relative clauses. In her analysis of relativization in Hup, a Nadehup language of the Vaupés region of the Amazon Basin, Patience Epps states, 'Relative clauses are

identified as nominalizations in many South American languages ... In some languages, headless relatives may be understood as occurring in an appositional relationship to the head noun, and thus are arguably the most basic form of relative clause in the language ... ' I argue Omagua shares this areal feature.

Culy states that internally headed relative clauses are nominalized clauses by definition. He writes, 'A (restrictive) internally headed relative clause is a nominalized sentence which modifies a nominal, overt or not, internal to the sentence (Culy, 1990 p. 27).' However, on this point, it is unclear whether he means that the entire complex DP containing a relative clause behaves as a noun in the matrix clause in the syntax (in which case the same can be accurately said of externally headed relative clauses) or whether he means to say that internally headed relative clauses are nominalized clauses, and as such behave differently from non-nominalized clauses in the grammar.

Under my analysis, both statements are crucially true of Omagua relative clauses. The former is easily demonstrated, as relative clauses in the language can bear NP clitics and appear as verbal arguments in matrix clauses, as shown in (1), where the plural marker, =na (an NP clitic) attaches to the entire relative clause, and this relative clause in turn serves as the subject of the matrix clause. It is not possible for other types of embedded clauses (such as complement clauses) to take similar morphology.

(1) uɾi -saɾi [caɾo nua =may =na] ...
come -FUT car big =REL =PL
'[Big cars *literally,* cars which are big] will come ... '

Less readily demonstrable is the latter statement, though I attempt to distinguish nominalized clauses in Omagua as a class which crucially behaves differently from non-nominalized clauses in the language in terms of a subject requirement which applies to all clauses except ones which have been nominalized. This can be shown by contrasting complement clauses, which bear no dependent morphology, with relative clauses, which obligatorily bear the clausal nominalizer =*may*. Examples (2a) and (2b) show that a complement clause must have a phonologically overt subject, where examples (3a) and (3b) show that this is not the case for relative clauses.

(2) a. ɾana sɪta ɾa chunani
3pl want 3sg be.small
'They want him to be small.'

b. *ɾana sɪta Ø chunani
3pl want 3sg be.small
'They want him to be small.'

(3) a. akia chunani =may yapana ɪɾaya
3sg be.small =REL run well
'The one who is small runs well.'

b. Ø chunani =may yapana ɪɾaya
3sg be.small =REL run well
'The one who is small runs well.'

I suggest that the crucial difference between these clause types is that relative clauses are nominalized clauses, which allows them to be treated specially in the syntax.

2 Omagua relativization

Omagua marks relative clauses with the clausal nominalizer =may, which attaches to the the verb of the relative clause, as shown in the subject relativization in (4).

(4) [yapisaɾa yapana =may] usu kamata =taɾa
man run =REL go work =PURP
'[The man who ran] is going in order to work.'

Relative clauses in Omagua may be headed or headless. However, headless relative clauses may not appear targeting all argument positions. Omagua shows a syntactic pocket of split ergativity in its relativizations, where subject relativizations of active intransitive verbs and subject relativizations of transitive verbs may not be headless, but subject relativizations of stative intransitive verbs and of object relativizations may be headless, so that (5a), a headless subject relativization of an activity verb is ungrammatical, but (5b) and (5c), a subject relativization of a stative intransitive and an object relativization, respectively, are grammatical.

(5) a. *[Ø yapana =may] ɪu panaɾa =kana
pro run =REL eat banana =PL
'[The one who runs] eats bananas.'

b. [Ø tʃunani =may] =mukwi ta usu uka =kati
pro be.small =REL =COMM 1SG go house =allative
'With [(the one) who is small], I go to the house.'

c. [ɾa kumɪsa =may] ipu -pa aisɪ

3sg say =REL sound -PERF ugly
'[That which he said] sounded ugly.'

Moreover, headless relative clauses may only appear when the target of relativization is third person, as is the case with pro-drop.

3 Omagua pro-drop

Overt phonological realization 3rd person pronominal objects in Omagua is optional in matrix clauses, as shown in examples (6)-(9).

(6) ɪnɪ puɾaɾa -usu -pa Ø/ɾana sani
2sg find -fut -perf pro/3pl soon
'You will find (them) soon.'

Example (7) shows that it is third person matrix objects only and not 3rd person matrix subjects which may be dropped, since in this example, an antecedent is equally close for both of the third person arguments in the second clause, but a subject argument is overtly expressed while the object one is dropped.

(7) ɾa tɨkɨta ɾa yawaɾa ɾa iʃaɾi -pa Ø
3sg tie 3sg dog 3sg leave -perf pro
'He tied up his dog. He left (him).'
*' … (He) left him.'

In order for an object to be grammatically dropped, it must first be introduced so that the antecedent of the dropped pronoun is recoverable, as shown in example (8), where a full DP referent is introduced in the first clause, reduced to a lexical pronoun in the second, and dropped in the third. This pattern fits with the generalization that pro-drop that appears in languages without overt verbal argument agreement should do so only as an anaphoric dependency where a sufficiently local antecedent is recoverable for the dropped pronoun (Keller, et. al, 1999).

(8) tana yapiʃikia ɾana iwasu ɾana ipuraka muɾa
1pl.excl.ms grab 3pl.ms paiche 3pl.ms make 3sg.ms

ɾana tɪwɪ -ta muɾa upa ɾasuy ɾana
3pl.ms salt -caus 3ms.sg all then 3pl.ms

ikiana -ta Ø kwaraʃi saku =kati
be.dry caus pro sun be.hot =loc

'We would grab their paiche, they'd make it, they'd salt the whole thing. Then, they'd dry (it) in the hot sun.'

Matrix subject arguments must be expressed for both stative and active verbs, as shown by the ungrammaticality of (10) and (11). The ungrammaticality of (10) and (11) can be contrasted with the grammaticality of (9) to show that matrix subject drop is not possible in the language, but matrix object drop is.

(9) ta sɪta yatɨma sandia =na ta pɪɾɪpɪ -ta
1sg.ms want plant watermelon =pl.ms 1sg.ms buy -caus

Ø =sɪnuni
pro =purp
'I want to plant watermelons so I can sell (them).'

There are no dropped third person subjects of stative verbs in matrix clauses in Omagua. I attribute this to a subject requirement in Omagua which is not present for nominalized clauses in the language.

(10) *Ø yapana
pro run
'he/she/it/etc. run(s).'

(11) Ø tʃunani
pro be.small
'he/she/it/etc. is small.'

Table (1) summarizes the pattern expressed in Omagua with respect to argument realization in matrix and dependent clauses.

Table 1.

	RC drop	**Matrix drop**	**Comp clause drop**
Object	Yes	Yes	yes
Intransitive stative subject	Yes	No	no
Intransitive active subject	No	No	no
Transitive subject	No	No	no

4 A feature based analysis of Omagua relative clauses

As demonstrated above, Omagua exhibits a typologically interesting pattern of relativization where object relativizations and subject relativizations of stative intransitive verbs may optionally appear headlessly and subject relativizations of other verbs may not.

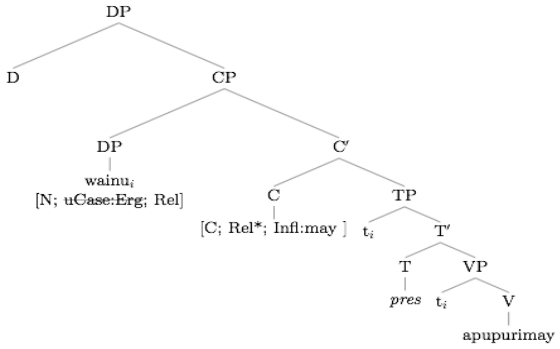
I propose that this distribution is attributable to the distribution of the null pronoun which allows for object dropping (but not subject dropping) in Omagua, and that the same null pronoun that's dropped in matrix clauses is dropped in relative clauses because this null pronoun inherently bears absolutive case so that it may not appear in a configuration where it should receive ergative case. Crucial to this assumption is the Minimalist operation Agree, which allows for a case matching configuration where DPs in Omagua may be endowed with case in the numeration and verbs in Omagua select for nouns with given case properties. Under Government and Binding theory, this assumption wouldn't hold, since feature matching does not exist in this framework.

With this in mind, I am proposing that both headed and 'headless' relative clauses are in fact internally headed and that headless relative clauses are headed by the null pronoun. Following this, relativized nouns must be merged in the relative clause where they receive case and theta role assignment. Under my analysis, the matrix verb selects for a DP complement. The head D of this complement (in addition to being null) selects for a CP complement, and is co-indexed with the clause internal DP which serves as the head of the relative clause. Relative clauses are a special clause type whose C bears a strong unchecked relativization feature, which triggers a Move operation that pulls the relevant head noun to spec CP.

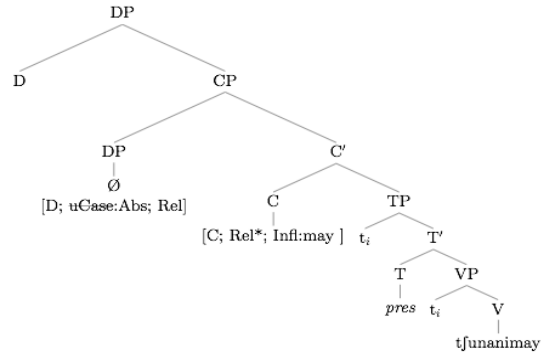
This analysis posits two uninterpretable inflectional features for any verb so that both C and T contain interpretable inflectional features (both of which may be null given that tense and aspect are most frequently unmarked and that

declarative clauses have no clausal agreement) that value V. This allows for the clausal nominalizer *=may* to appear via Agree in relative clauses and other nominalized clauses, and for null clause type agreement to appear in matrix and complement clauses.

Thus, the relevant features for the null pronoun are [N, uCase:abs], where the valued case feature on the pronoun must match the case feature of the verb which selects it. The relevant features of C are [CT:Rel infl:may uT uRel*]. The uRel* feature on C is responsible for pulling the relativized noun up to spec-CP. The valued uninterpretable case feature on the null pronoun prevents the null pronoun from appearing anywhere it couldn't express absolutive case.



wainu apupuɾimay, 'woman who cooks'



tʃunanimay, '(the one) who is small'

Following this, the pattern of relative clauses in Omagua is correctly predicted, and both headed and headless relative clauses are constructed in the same manner.

5 Conclusions and further issues

Omagua is typologically interesting in that it can be shown to have internally headed relative clauses through the distribution of its null third person pronoun. Syntactically restricting this pronoun to appear only with absolutive case allows for the correct prediction of Omagua's pattern of relativization.

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