Relative Clauses in Guarani

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1   Background

- Cross-linguistically, languages form *Relative Clauses* (RC) in three ways.[1]

- A language like Chuj in (1), exhibits *head-initial* RCs (a.k.a. postnominal).[2]

  (1)   *Left-headed Chuj relative clause (Álvarez et al. 2020):*
        tyi   k-mana [head **li ixim**   [RC choñkol=ba i-choñ aj-Maria   ]]
        PFV   A1-buy   **the corn**   PROG=REL   A3-sell   NC-Maria
        'I bought the corn that Maria is selling.' (Álvarez et al. 2020:p. 2, ex. 1)

- Imbabura Quechua in (2) exhibits *head-final* RCs (a.k.a. prenominal).

  (2)   *Right-headed Imbabura Quechua relative clause:*
        [[RC warmi-ta   juya-shea] **runa** head] aicha-ta   micu-ju-n
        woman-ACC   love-PST   **man**   meat-ACC   eat-PROG-3
        'The man who loved the woman is eating meat.' (Cole et al. 1982: p.116, ex. 10)

- Tuparí exhibits *head-internal* RCs (3): the head noun appears inside the RC.

  (3)   [N [S **tarupa-t**   te-otsiraat   ] he-t   ] nẽ   e-amigo?
        non.indigenous 3C-go.PAUC.PST   NMLZ-NUC   YES/NO 2SG-friend
        'Are the white people who went your friends?' (Singerman 2021a: p.438, ex. 11)

- Languages typically stick to one strategy of relativization and typically exhibit restrictions against the other forms Hiraiwa (2017).

- Beyond this, if languages use a particular strategy than this often makes predictions about other properties of the grammar: e.g. head-internal is associated with *wh*-in-situ.

Today: I'll show that Guarani allows for multiple strategies of relativization including:

- head-initial (as in (1))   [NP [RC ...]]

- head-final (as in (2))   [[RC ...] NP]

- head-internal (as in (3))   [[RC ... NP ...]]

- super-free headless relatives (Caponigro et al. 2021; Caponigro 2022: term) [[... RC ...]]

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2   Background

2.1   Language background and data collection

- In particular, I report data today on the Coronel Oviedo and Caaguazu dialects (two towns in central Paraguay with b/w 50.000/100.000 population). They're highlighted on the map in (4).

[2] There are multiple ways to refer to each of these types of RCs. However, they are all equivalent: right-headed = prenominal = head-final, left-headed = postnominal = head-initial. In this talk, I adopt the terminology *head-initial/final/internal* for consistency.

- I worked with six speakers (age range = 30–60) whose first language is Guarani and who all learned Spanish at a later age all in one-on-one carefully constructed elicitation.

(4)   *Map of Paraguay w/ Coronel Oviedo and Caaguazu:*

- Guarani has a very strong prescriptive tradition and in doing fieldwork/public outreach/research on the language I do my best to bring attention to non-standard dialects.

- In general, there is some descriptive work on Guarani (Gregores and Suarez 1967; de Guarania 1997, 2008; Krivoshein de Canese and Alcaraz 2001, 2006; Zarratea 2002; Krivoshein de Canese and Alcaraz 2006; Estigarribia and Pintas 2017; Estigarribia 2020: among others) including some original Jesuit grammars (Anchieta 1595 [1979]; Aragona 1625 [1979]; Ruiz de Montoya 1724 [1876]; Restivo 1724 [1892]). But no previous work has focused on Relative Clauses.

- On the theoretical side, there is also a lot of work on Guarani (Monserrat and Soares 1983; Jensen 1990, 1998, 1999; Velázquez-Castillo 1991, 2002; Rose 2015; Tonhauser 2011a,b, 2020, 2006, 2007; Tonhauser and Colijn 2010; Clopper and Tonhauser 2013; Shain and Tonhauser 2010).

- One thing I learned through this outreach is that, despite its official status, at a national level Guarani is losing government support, but local governments continue to appreciate its value (happy to talk more about this in the discussion period!).[3]

2.2   RC Morphology

- RCs in Guarani are formed by adding the relativizer suffix *va* to a fully-inflected verb.

- (5a) shows a transitive clause, and (5b) shows the relativizer *va* used to modify the object *pe aranduka* 'the book'. If only the *va* is used, the RC is interpreted as present tense.

[3] The new president of Paraguay has been quoted saying "Do people really still speak Guarani at all?" When, even in the capital Asunción, Guarani is heard all over the streets spoken by people of many different backgrounds...

- Past tense in RCs is expressed by adding *'ekue* to the relativizer, forming *va-'ekue* (5c).

(5) *Baselines:*

    a. (che) a-mo-ñe'ẽ   peteĩ aranduka
        (I)   1-make-speak a   book
        'I read/am reading a book.'   (baseline transitive clause)

    b. che-gustá   [$_{DP}$ pe aranduka [$_{RC}$ a-mo-ñe'ẽ-**va**   ]]
        1OBJ-please   the book   1SUBJ-CAUS-speak-**REL**
        'I like the book that I'm reading.'   (object RC, w/ present Tense)

    c. che-gustá   [$_{DP}$ pe aranduka [$_{RC}$ a-mo-ñe'ẽ-**va**-**'ekue**   ]]
        1OBJ-please   the book   1SUBJ-CAUS-speak-**REL**-**PST**
        'I like the book that I read.'   (object RC, w/ past Tense)

- In general, uninflected matrix verbs are ambiguous between present and past tense. This is *not* the case for RCs which, in the absence of past tense morphology, can only be interpreted as present tense.

- The RC past tense *'ekue* cannot be used in matrix clauses (6a), (6b). Instead, the matrix past tense marker *kuri* is used (6c).

(6) a. *(che) a-mo-ñe'ẽ-**'ekue**   peteĩ aranduka
        (I)   1-make-speak-**PST** a   book
        Int: 'I read a book.'

    b. *Cindy o-hai-**'ekue** peteĩ aranduka
        Cindy 3-write-**PST** a   book
        Int: 'Cindy wrote a book.'

    c. (che) a-mo-ñe'ẽ-**kuri**   peteĩ aranduka
        (I)   1-make-speak-**PST** a   book
        'I read a book.'

- Tense, Aspect, and Negation suffixes all appear *inside* the relativizer *va* (7). With respect to this generalization, RC past tense is unique: it appears *outside* of the relativizer.

(7) *Aspect and future tense appear inside the RC marker:*
    Maria o-monda pe aranduka **n**-a-mo-ñe'ẽ-**mbá**-**ta**-**ma**-**i**-va-'ekue
    Maria 3-steal   the book   **NEG**-1-CAUS-speak-**TOT**-**FUT**-**COMP**-**NEG**-REL-PST
    'Maria stole the book that I was not about to finish reading completely.'

2.3 Scrambling

- Guarani allows for liberal word order and all six orders are licit for a transitive clauses (8).[4]

(8) a. che ai-pytyvõ   Juan-pe
        I   1.SUBJ-help Juan-DOM
        'I help Juan.'   SVO

    b. che Juan-pe   ai-pytyvõ
        I   Juan-DOM 1.SUBJ-help   SOV

[4] There is also very free word order in intransitives/ditransitives. Topichood/Focus is often required to derive these orders in other languages, in Guarani it does not seem to be play as central of a role.

c. Juan-pe che ai-pytyvõ
Juan-DOM I 1.SUBJ-help   OSV

d. ai-pytyvõ che Juan-pe
1.SUBJ-help I Juan-DOM   VSO

e. ai-pytyvõ Juan-pe che
1.SUBJ-help Juan-DOM I   VOS

f. Juan-pe ai-pytyvõ che
Juan-DOM 1.SUBJ-help I   OVS

2.4 Accessibility hierarchy

- With respect to the Noun-Phrase Accessability Hierarchy (NPAH) (Comrie and Keenan 1977), Guarani is able to relativize subjects (9b) and objects (9b) but not Instruments (9c).[5]

  (9) a. mitã ojoka ventaná ita-pe
  boy 3-break window rock-with
  'The boy broke the window with a/the rock.'   (baseline)

  b. **mitã** o-joka-va-'ekue ventaná ita-pe
  boy 3-break-REL-PST window rock-with
  'The boy that broke the window with the rock.'   (relativized subject)

  c. **ventaná** mitã o-joka-va-'ekue ita-pe
  window boy 3-break-REL-PST rock-with
  'The window the boy broke.'   (relativized object)

  d. *che a-juhu **ita** mitã o-joka-va-'ekue ventantá
  I 1-find **rock** boy 3-break-REL-PST window
  Int: 'I found the rock the boy broke the window with.'   (*relativized instrument)

  e. che a-juhu **ita** mitã oi-puru-va-'ekue o-joka-haǧua ventaná
  I 1-find **rock** boy 3-use-REL-PST 3-break-TO window
  'I found the rock the boy used to break the window.'   (instrument with *puru* 'use')

- This also holds for other PPs/other constituents like Indirect Object (10a).

  (10) a. pe mbo'ehara o-me'ẽ mitã-nguera-pe aranduka
  the teacher 3-give child-PL-DOM book
  'The teacher gave books to the kids.'   (baseline)

  b. **umi aranduka-kuera** pe mbo'ehara o-me'ẽ-va-'ekue mitã-nguera-pe
  those book-PL the teacher 3-give-REL-PST child-PL-DOM
  'The books that the teacher gave the kids.'   (relativized DO)

  c. ***umi mitã-nguera-pe** o-me'ẽ-va-'ekue pe mbo'ehara aranduka-(kuera)
  those child-PL-DOM 3-give-REL-PST the teacher book-(PL)
  'The children that were given the books by the teacher.'   (*relativized IO)

[5] I have not had the chance to test all of the members of the hierarchy, but in general Guarani only allows for relativized (direrct) objects and subjects. For non-DO/subjects a different structure must be used.

   d.   umi   mitã-nguera-pe o-me'ẽ-kuri mbo'ehara aranduka-(kuera)
        those child-PL-DOM   3-give-PST   teacher   book-(PL)

        'The children that were given the books by the teacher.' (grammatical (10c))

RC basics

✓ RCs formed with *-va*   (appears outside TAM/Negation)

✓ past tense in RC expressed with *-'ekue*   (appears outside *-va*)

✓ RC past tense banned in matrix clauses   (*kuri*, not *'ekue*)

✓ Guarani has scrambling   (all 6 word orders allowed)

✓ Only subjects/objects may be relativized   (IOs, PPs, etc. cannot)

3 Headedness in Guarani RCs

- Recall from the introduction that there are three common strategies for RC formation cross-linguistically: i) **head-initial**, ii) **head-final**, and iii) **head-internal**.[6]

- They differ w.r.t. the *linear* relation between the head noun and the RC.

- In this section, I'll demonstrate that Guarani exhibits all three and provide evidence for the following generalizations:

[6] Once again these are terminologically equivalent to other RC terms like left/right headed, pre/postnominal/etc..

Generalizations about headedness in Guarani

⇒ any RC (object/subject) may be head-initial

⇒ only object RCs may be head-final

⇒ IHRCs are attested with multiple speakers from Coronel Oviedo

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3.1 Head-initial RCs

- Let's begin with head-initial RCs in Guarani (11). Both relativized subjects (11a) and relativized objects (11b) may appear in a head-initial position before the RC.

(11) a. *Head-initial subject RC:*

       ai-kuaa [$_{DP}$ **tapicha** [$_{RC}$ o-hepyme'ẽ-va mandi'o   ]]
       1-know   **man**   3-sell-REL   mandioca
       'I know a/the man who sells mandioca.'

  b. *Head-initial object RC:*

       a-moñe'ẽ-ta [$_{DP}$ **pe aranduka** [$_{RC}$ Cindy o-hai-va-'ekue   ]]
       1-read-FUT   **the book**   Cindy 3-write-REL-PST
       'I'm going to read the book Cindy wrote tomorrow.'

- Adverbs, like the temporal *ko'erõ* 'tomorrow' can appear in various places: i) phrase-finally (12), ii) phrase-initially (13), and iii) b/w the matrix verb and RC (14).

(12) a-moñe'ẽ-ta [_{DP} pe aranduka [_{RC} Cindy o-hai-va-'ekue]] **ko'erõ**
     1-read-FUT   the book   Cindy 3-write-REL-PST   **tomorrow**
     'I'm going to read the book Cindy wrote tomorrow.'

(13) **ko'erõ**   a-moñe'ẽ-ta [_{DP} pe aranduka [_{RC} Cindy o-hai-va-'ekue]]
     tomorrow 1-read-FUT   the book   Cindy 3-write-REL-PST
     'I'm going to read the book Cindy wrote tomorrow.'

(14) a-moñe'ẽ-ta **ko'erõ**   [_{DP} pe aranduka [_{RC} Cindy o-hai-va-'ekue]]
     1-read-FUT **tomorrow**   the book   Cindy 3-write-REL-PST
     'I'm going to read the book Cindy wrote tomorrow.'

- However, somewhat unsurprisingly, adverbs cannot appear: i) between the D of the head noun and the head noun itself (15), ii) marginally between the head noun and RC (16), or iii) between the subject and RC (17).

(15) *a-moñe'ẽ-ta [_{DP} pe **ko'erõ**   aranduka [_{RC} Cindy o-hai-va-'ekue]]
     1-read-FUT   the **tomorrow** book   Cindy 3-write-REL-PST
     Int: 'I'm going to read the book Cindy wrote tomorrow.'

(16) ?a-moñe'ẽ-ta pe aranduka **ko'erõ**   Cindy o-hai-va-'ekue
     1-read-FUT the book   **tomorrow** Cindy 3-write-REL-PST
     Int: 'I'm going to read the book Cindy wrote tomorrow.' (extraposed RC?)

(17) *a-moñe'ẽ-ta pe aranduka Cindy **ko'erõ**   o-hai-va-'ekue
     1-read-FUT the book   Cindy **tomorrow** 3-write-REL-PST
     Int: 'I'm going to read the book Cindy wrote tomorrow.' (extraposed RC?)

Generalizations about headedness in Guarani

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⇒ only object RCs may be head-final

⇒ IHRCs are attested with multiple speakers from Coronel Oviedo

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3.2 Head-final RCs

- Turning to head-final RCs in which the head noun appears to the right of the RC, this is available for relativized objects as in (18a) and (18b).

(18) a. a-moñe'ẽ-ta [[_{RC} o-hai-va'ekue   Cindy] [_{DP} **pe aranduka**]]
        1-read-FUT   3-write-REL-PST Cindy   **the book**
        'Tomorrow I will read the/a book Cindy wrote.'

b. a-karu [[_{RC} kuña   o-monda-va-'ekue] [_{DP} **pakova**]]
1-eat   woman 3-steal-RC-PST   **banana**
'I ate the banana the woman stole.'

- However, if the embedded subject appears to the right of the head noun, it results in ungrammaticality as in (19).[7]

[7] This structure is an IHRC and is accepted by multiple speakers in Coronel Oviedo, however this data is from a speaker from Caaguazu.

(19) *ko'erõ   a-moñe'ẽ-ta o-hai-va'ekue   **pe aranduka** Cindy
tomorrow 1-read-FUT   3-write-REL-PST **the book**   Cindy
Int: 'Tomorrow I will read the/a book Cindy wrote.'

- This is not to say that the embedded subject must appears after the RC as in (18a). Instead, it can also appear in its "canonical" positions pre-RC (20).

(20) ko'erõ   a-moñe'ẽ-ta [[_{RC} Cindy o-hai-va'ekue   ] [_{DP} **pe aranduka**]]
tomorrow 1-read-FUT   Cindy 3-write-REL-PST   **the book**
'Tomorrow I will read the/a book Cindy wrote.'

- Relativized subjects, on the other hand, *cannot* be head final (21). This holds whether (21a) or not the object also appears to the right of the verb (21b).

(21) a. *a-h-echa [[_{RC} pe mbarakaja o-monda-va-'ekue] [_{DP} **pe karai**]]
1-DIR-see   the cat   3-steal-REL-PST   **the man**
Int: 'I saw the man that stole the cat.'

b. *a-h-echa [[_{RC} o-monda-va-'ekue pe   mbarakaja] [_{DP} **pe karai**]]
1-DIR-see   3-steal-REL-PST   the cat   **the man**
Int: 'I saw the man that stole the cat.'

Generalizations about headedness in Guarani

✓ any RC (object/subject) may be head-initial

✓ only object RCs may be head-final

⇒ IHRCs are attested with multiple speakers from Coronel Oviedo

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3.3 Internally-headed RCs (IHRCs)

- The previous sections showed primarily data and judgements from a speaker of Guarani from Caaguazu (although Oviedo speakers share the positive judgements above).[8]

[8] The interspeaker variation in judgements is very interesting and I have some ideas about it if you'd like to ask in the question period!

- However, multiple speakers in Coronel Oviedo accept what appear to be internally-headed RCs.

- IHRCs are, however, restricted by the following generalization:

⇒ the relativized argument must be in its "canonical" position

- This is demonstrated through the contrast in judgements between (22a) and (22b). In (22a), the RC-internal head *mbarakaja* 'cat' appears post-verbally adjacent. Whereas in (22b), the RC-internal head appears pre-verbally in the RC and is ungrammatical.

(22) a. a-h-aihu   o-monda-va-'ekue   **mbarakaja**   karai
      1-DIR-love   3-steal-REL-PST   **cat**   man
      'I love the cat the man stole.'

     b. *a-h-aihu   karai   **mbarakaja**   o-monda-va-'ekue
      1-DIR-love   man   **cat**   3-steal-REL-PST
      Intended: 'I love the cat the man stole.'

- This opposite restriction holds for relativized subjects which remain RC-internal: they must appear pre-verbally as in (23a) and cannot appear post-verbally (23b).

(23) a. a-h-aihu   mbarakaja   **kuña**   o-monda-va-'ekue
      1-DIR-love   cat   **woman**   3-steal-REL-PST
      'I love the woman that stole the cat.'

     b. *a-h-aihu   o-monda-va-'ekue   **karai**   mbarakaja
      1-DIR-love   3-steal-REL-PST   **man**   cat
      Int: 'I love the man that stole the cat.'

- Insofar as IHRCs are considered "in-situ" (Hiraiwa 2017), this generalization might make sense in Guarani: the only licit IHRCs are those in which the argument hugs the verb in the canonical position, while in headed RCs various orders are available.[9]

- In addition, these findings may align Guarani with other languages in the Tupi-Guaraní family like Tuparí (Singerman 2021a,b), and many other languages of South America (Van Gijn et al. 2011: for an overview) which allow for IHRCs.

Generalizations about headedness in Guarani

✓ any RC (object/subject) may be head-initial   (all speakers)

✓ only object RCs may be head-final   (Caaguazu)

✓ IHRCs are attested with multiple speakers   (Coronel Oviedo)

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4 Headless relatives

- All of the examples of RCs above contained a **head noun** which is the noun modified by the relative clause.

- However, there are also various types of RCs in which there is no head and instead either a *wh*-element as in the Free Relative (24) or nothing at all as in the Super-free relative clause (25).[10]

(24)   *Headless FR in English:*
     I ate [HRC **what** you cooked].

(25)   *Super-free relatives in Guarani:*
     (che) ha-'u   [HRC ＿＿   re-kosiná-va-'ekue]
     (I)   1-eat   2-cook-REL-PST
     'I ate what you cooked.'

[9] For previous work on IHRCs see Kuroda (1974, 1975, 1976); Williamson (1984); Culy (1990); Basilico (1996); Watanabe (2004); Hiraiwa (2005) or Hiraiwa (2017) for an overview.

[10] The equivalent of (24) does not exist in Guarani because of a general ban on relative pronouns. Therefore, headless RCs are not very common in Guarnai, but superfree headless RCs are.

- Caponigro et al. (2021) and Caponigro (2022) define RCs like (25) as *superfree* relative because they contain no overt element.

- Headless relative clauses are defined by the fact that they have no head and often, as is the case in English, contain a *wh*-word instead of a head.

- Besides super-free relatives, Guarani also allows for light-headed relative clauses (Caponigro et al. 2021; Caponigro 2022) in which a *determiner* is present, but no head noun (26).[11]

  (26) *Light-headed relative in Guarani:*
        (che) ha-'u [HRC **pe** re-kosiná-va-'ekue]
        (I)   1-eat   **the** 2-cook-REL-PST
        'I ate what you cooked.'

- In general, both types of free relatives are accepted in Guarani. Speakers accept both w/ and w/o determiners in most contexts.[12]

- These super-free relatives are available for both object (27a) and subject relatives (27b) (where the relativized argument is an object or subject, respectively).

  (27) a. a-moñe'ẽ [HRC o-je-ha'i-va-'ekue   ñe'ẽ   Guarani-me]
            1-read   3-PASS-write-REL-PST language Guarani-LOC
            'I read what was written in Guarani.'

        b. ai-jogua [HRC pe karai o-vendé-va-'ekue]
            1-buy   the man 3-sell-REL-PST
            'I bought what the man was selling/sold.'

- Across the board, the definite determiner *pe* is optional for definiteness. Therefore, it is not unexpected to find optionality for these types of RCs.[13]

  (28) *pe optional for definiteness:*
        a. (che) a-hecha jagua
            (I)   1-see   dog
            'I saw a/the dog.'

        b. (che) a-hecha **pe** jagua
            (I)   1-see   **the** dog
            'I saw the dog.'

- These super-free relatives do not appear to be restricted to any particular constructions or verbs, they are generally allowed.

  (29) a-jeroiva [HRC o-je'e-va-'ekue nogloss]
        1-believe   3-say-REL-PST
        'I believe what got said.'

  (30) *Free relatives w/ and w/o determiner:*
        a. a-juhu [HRC o-ñe-monda-va-'ekue chehegui]
            1-find   3-PASS-steal-REL-PST me.OBL
            'I found what I had stolen (from me).'

[11] In some languages, there is a D and a *wh*-pronoun like Spanish *el que trabaja*.

[12] My speakers don't seem to be consistent with which structures require the determiner and which do not. There are likely discourse factors involved.

[13] Little et al. (2023) analyse super-free relatives as NPs, and free relatives w/ a *wh*-element as CPs. Further work on Guarani can be dedicated to comparing the distribution of bare nouns and SFRCs as Little et al. (2023) do.

b. a-juhu-ma   [_HRC upe o-ñe-monda-va-'ekue chehegui]
1-find-COMP   the 3-PASS-steal-REL-PST me.OBL

'I found what I had stolen (from me).'

5 Conclusion

- Guarani allows for various types of RC structures w.r.t. headedness and headlessness.

- These include: **head-initial**, **head-final**, **head-internal**, and **super-free headless relatives** (Caponigro et al. 2021; Caponigro 2022).

- Some of the findings presented here are not surprising: the fact that a language which allows for scrambling allows for various ordered within a RC. Under this perspective, the ban on head-final subject RCs is interesting.

- However, following discussion from Cole (1987); Cole and Hermon (1994) languages which allow for IHRC are often SOV and allow for *wh*-in-situ. Guarani, has been argued to be SVO (Tonhauser and Colijn 2010: for a claim based on corpus study) and does *not* allow for *wh*-in-situ (see my talk with Isa Cabrera later today).

- However, Guarani also has some characteristics of SOV languages like post-positions and lots of suffixing. Therefore, RCs may be illuminating w.r.t. the basic word order in Guarani which remains up in the air. I leave this to future work.

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