Relative Clause Structure in Dakelh (Athapaskan)

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1. Introduction

- This paper presents new first-hand data concerning relative clause structure in Dakelh (also known as Carrier), a Northern Athapaskan language spoken in central interior British Columbia, Canada.\(^1\)

- The Lheidli dialect of Dakelh, the focus of the study, has not been well documented and is extremely endangered. To date there have been no published theoretical studies of Dakelh syntax.

- Relative clauses (RCs) in Athapaskan languages show variability in (i) the position of the head noun vis-à-vis the relative clause, and (ii) pronominal agreement (in person and number) with the head noun, marked on the verb of the relative clause.

- The variation in relative clause structures attested across the Athapaskan family poses a theoretical-analytical challenge: to identify a common structural configuration along with well-defined parameters that can accommodate and account for the observed systems of individual languages.

- This has been a central concern of the literature on Athapaskan morphosyntax, which has seen a considerable debate regarding relative constructions and the internal structure of relative clauses in particular (Barss et al. 1989; Perkins 1982; Platero 1974, 1978, 1982; Rice 1989; Rushforth & Gorbet 1989; Saxon 2000; Speas 1990; Willie 1989; Willie & Jelinek 2000).

- However, most studies of this topic have been limited to Navajo, a language belonging to the Southern subgroup. Very little research has been done on Northern languages in this respect, where, for example, agreement patterns in general tend to differ in significant ways from Navajo.

- This paper is intended as a contribution to the body of literature on Athapaskan relative constructions, providing new data from a less well studied language which bears on the central issues involved in the analysis of such constructions.

- The structures uncovered in Dakelh will be contrasted with the more familiar patterns found in Navajo and other languages of the family, highlighting the main similarities and differences and their analytical implications.

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Structure of the talk:

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4. Dakelh RCs with subject as head
5. Dakelh RCs with oblique object as head
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2. Background

2.1. Language background

- This paper discusses data from the Lheidli dialect of Dakelh spoken in and around Prince George, British Columbia.
- The Athapaskan family is more distantly related to Eyak and Tlingit, together forming the Athapaskan-Eyak-Tlingit, or AET phylum (Leer 1999), also known in some sources as Na-Dene.
- The family is divided into three branches: Northern (Canada and Alaska), Pacific Coast (Oregon, California), and Southern or Apachean (American southwest). See Appendix B for a map. Dakelh belongs to the Northern branch.
- The Lheidli dialect is not extensively documented (Poser 2001, 2002, Bird 2002, Gessner 2003) and is extremely endangered, with fewer than 10 fluent native speakers.
- Lheidli is one of 12 Dakelh dialects; the language as a whole is estimated to have 1000 speakers (Yinka Déné Language Institute 2004).
- There are three main dialect groups (Poser 1999):

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(1)

Dakelh

Nak’albun-Dzinghubun (Stuart-Trembleur Lake) |
- Tl’azt’en
- Yekooche
- Nak’azdli

Southern

Fraser-Nechakoh |
- Cheslatta
- Sdelakoh
- Ndlleh
- Saik’uz
- Lheidli

Blackwater |
- Lhk’acho
- Lhoosk’uz
- Ndazko
- Lhtakoh
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The language is probably best known from Father Morice’s monumental two-volume grammar and dictionary (1932), which documents the Nak’azdli dialect.

All cited Dakelh data in this paper derives from the author’s fieldnotes.

2.2. Brief overview of morphology

Word order in Athapaskan languages is SOV. Overt subject and object noun phrases (NPs) are not necessarily required; a verb alone can form a grammatical sentence.

While nouns are relatively simple, verbs are notoriously complex.

The Athapaskan verb consists of a root which carries the main lexical meaning, and multiple prefixes serving to mark subject and object agreement, tense, aspect, voice and valency, as well as adverbial and more abstract “thematic” notions.

Traditionally, researchers have analyzed the verb word as consisting of three components: the verb root (usually called ‘stem’ in the Athapaskan literature), and two discrete prefixal domains known as the conjunct and disjunct domains (Li 1933).

While various models of the verb have been proposed, it is traditionally represented as a template. The Dakelh template is given in (2); disjunct prefixes are not shown in detail.

(2) Dakelh verb template (Poser 2000, Gessner 2003)²

<table>
<thead>
<tr>
<th>DISJ. #</th>
<th>Obj</th>
<th>Con</th>
<th>S_o</th>
<th>W/D/Nq</th>
<th>Cng</th>
<th>Inc</th>
<th>Neg</th>
<th>Mod/Asp</th>
<th>S_i</th>
<th>Val</th>
<th>=ROOT</th>
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<tbody>
<tr>
<td>D-Stem↑</td>
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<tr>
<td>C-Stem (conjunct domain)</td>
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<tr>
<td>↑ V-Stem ↑</td>
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</tbody>
</table>

The Athapaskan verb has been noted to be typologically unusual for several reasons:

⇒ derivational morphemes are found linearly outside of inflectional morphemes;

⇒ there are discontinuous morphemes (lexical entries);

⇒ some morpheme classes are distributed over more than one position (e.g. inner vs. outer subject prefixes).

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² Obj = object agreement; Con = conative; S_o = outer subject agreement (1p, 3dp); W/D/Nq = Wh-class/D-class/N-class absolutive argument qualifier; Cng = conjugation prefixes marking aspect; Inc = inceptive; Neg = negative; Mod = mode; Asp = aspect; S_i = inner subject agreement (1/2/3s, 1d, 2dp); Val = voice/valency.
3. Relative clauses with object as head

- The examples which follow are written in the Dakelh orthography, approved by the Carrier Linguistic Committee (see Antoine et al 1974). Most letters represent their IPA counterparts, with some exceptions; see Appendix A.
- Only very general morpheme breakdowns are provided. ³
- The relative clause is enclosed in square brackets and the head of the relative clause is underlined.
- The verb within the relative clause may be marked with a relative suffix, usually –i, but sometimes –a when the relative subject is human.
- Use of this suffix is optional. Bill Poser (p.c.) reports that the relative suffix is obligatory only in small areas of the Nak’albun-Dzinghubun dialect grouping. In all Southern dialects, including the Lheidli dialect represented here, the suffix is optional.

3.1. Head = object; RC is subject of matrix

(3) [Nahbai lhi yuzgus-i] too lhai yutnai.
weasel dog 3sO-3sS-bite$_{PA}$-rel water much 3sO-3sS-drink$_{PA}$
The dog that the weasel bit drank a lot of water.

(4) [Nahbai lhi yuzgus-i] dazsai.
weasel dog 3sO-3sS-bite$_{PA}$-rel 3sS-die$_{PA}$
The dog that the weasel bit died.

(5) [Brenda dune yuztalh-a] tazul nayedai.
Brenda man 3sO-3sS-kick$_{PA}$-rel soup 3sO-3sS-eat$_{PA}$
The man that Brenda kicked ate the soup.

(6) Chundoo [nyugah dune ___ tsettselh be yutselh-i] untezghes.
jackpine that man axe with 3sO-3sS-chop$_{PA}$-rel 3sS-fall$_{PA}$
The jackpine that the man chopped (with an axe) fell.

³ The following abbreviations are used:

- 1s/1d/1p: First person singular/dual/plural
- 2s/2d/2p: Second person singular/dual/plural
- 3s/3d/3p: Third person singular/dual/plural
- FA: Future affirmative mode (verb stem)
- IA: Imperfective affirmative mode (verb stem)
- PA: Perfective affirmative mode (verb stem)
- O: Object agreement
- S: Subject agreement
- part: Particle
- prf: Perfective mode prefix
- refl: Reflexive
3.2. Head = object; RC is object of matrix

John grandmother moccasins 3sO-3sS-make<sub>PA</sub>-rel 3sS-sell<sub>PA</sub>
John sold the moccasins that my grandmother made.

(9)  Ts'eke [John duni yuzelghui-i] yulez.
woman John moose 3sO-3sS-kill<sub>PA</sub>-rel 3sO-3sS-boil<sub>PA</sub>
The woman is boiling the moose that John killed.

(10) John lhi [dune yuztalh] yunalh'en.
John dog man 3sO-3sS-kick<sub>PA</sub> 3sO-3sS-see<sub>PA</sub>
John saw the dog that the man kicked.

3.3. Head = object; RC is oblique object of matrix

(11) John goh [nyugah ts'eke niyulh'oh-i] tseba yulht'es.
John rabbit that woman 3sO-3sS-skin<sub>PA</sub>-rel fireside 3sO-3sS-cook<sub>PA</sub>
John cooked (on the fire) the rabbit that the woman skinned.

Brenda comb John 3sO-for-3sS-buy<sub>PA</sub>-rel 3sO-3sS-use<sub>PA</sub>
Brenda is using the comb that John bought for her.

3.4. Discussion

- Relatives with object as head provide the most interesting data.
- As can be seen in 3.1-3.3, both internally-headed and externally-headed RCs were produced when elicited.
- For each example, I checked whether the alternative order was acceptable (i.e. whether external heading (OSV order) was grammatical for the sentences which were produced internally-headed, and vice versa).
- It was found that generally either possibility was acceptable to all three speakers, with some exceptions.
- If the semantics of the verb makes the identification of the arguments (linking of theta roles with overt NPs) clear, either order is possible. For example, men can chop down
jackpines, but jackpines do not chop down men, not even in the wilds of northern Canada!

(14) Chundoo [nyugah dune __ tsettseh be yut塞尔h-i] untezges.  
jackpine that man axe with 3sO-3sS-chopPA-rel 3sS-fallPA  
[Nyugah dune chundoo tsettseh be yut塞尔h-i] untezges.  
that man jackpine axe with 3sO-3sS-chopPA-rel 3sS-fallPA  

Both: The jackpine that the man chopped (with an axe) fell.

- However, sentences which are potentially ambiguous (and which are elicited without establishing a context) are given in SOV order with S as head. The simple SOV sentence is presented in (15) and the sentence with the RC in (16).

(15) Duneyaz ts'ekeyaz yulhwus.  
boy girl 3sO-3sS-ticklePA  
The boy tickled the girl.

(16) Yvonne [duneyaz ts'ekeyaz yulhwus] ya'en.  
Yvonne boy girl 3sO-3sS-ticklePA 3sO-3sS-seePA  
a) Yvonne saw the boy who tickled the girl.  
S [SOV-rel] V  
b) *Yvonne saw the boy that the girl tickled.  
S [SV-rel] V  
c) *Yvonne saw the girl who the boy tickled.  
S [SOV-rel] V  

- The only interpretation possible for this sentence is (a). Likewise if the girl is the subject of the tickling, and the object of the seeing, the RC is given in SOV order, with no other interpretation possible.

(17) Yvonne [ts'ekeyaz duneyaz yulhwus] ya'en.  
Yvonne girl boy 3sO-3sS-ticklePA 3sO-3sS-seePA  
a) Yvonne saw the girl who tickled the boy.  
S [SOV-rel] V  
b) *Yvonne saw the girl that the boy tickled.  
c) *Yvonne saw the boy who the girl tickled.

- Once a context has been established in the dialogue, there is more flexibility. Two orders are possible, even in sentences which may otherwise be ambiguous. For example, having built up a context about a weasel biting a dog, in a sentence where the object dog is the head, speakers accept (and will produce) either order of subject and object NPs to give the intended meaning.
However, if the same Dakelh sentences are tested many days later, when a context is no longer clear, speakers give ambiguous English translations.

For example, the sentence given directly above was later translated with a second meaning.

The weasel that the dog bit died.

This time, the dog, initial in the sentence, is interpreted as the subject of the relative, giving SOV order. Given the logical relationship between being bitten and dying, the weasel, object of the biting, becomes subject of the matrix verb die.

There are similar examples for other types of RCs.

To summarize, when the head of an RC is the object, two possibilities clearly exist: internally-headed SOV RCs, and externally-headed clauses with OSV order.

The latter possibility is excluded when ambiguity will result.

Establishing a context, and logical relations between predicates, may affect the possible orders as well as the possible interpretations of the sentence.

4. Relative clauses with subject as head

4.1. Head = subject; RC is subject of matrix

With an established context, the arguments of the RC are unambiguous (the weasel is the biter, the dog is the bitten animal) regardless of the order. Note, however, that a second reading is possible for the first sentence of the two with respect to the subject of the matrix clause. ‘The weasel that bit the dog died’ is an alternative. The third logical possibility, ‘The weasel that the dog bit died’ is ruled out by the established context.
(23) [Nahbai lhi yuzgus-i] nduda inle.
weasel dog 3sO-3sS-bite\textsubscript{PA}-rel 3sS-sick\textsubscript{IA} part\textsuperscript{5}
The weasel that bit the dog got sick.

(24) [Dut'ai but'a delk'un-i] 'un whut'o.
duck its-wings 3sS-red\textsubscript{IA}-rel over there 3sS-fly\textsubscript{PA}
The duck that has red wings flew away.

(25) [Ts'eyeke kwun ghoh us-da-a] lhukw sba yulht'es.
woman fire near 3sS-sit\textsubscript{IA}-rel fish me-for 3sO-3sS-cook\textsubscript{IA}
The woman who is sitting near the fire is cooking a fish for me.

4.2. Head = subject; RC is object of matrix

(26) Si [lhukw uncha-i] yu'ust'as
I fish 3sS-big\textsubscript{IA}-rel 3sO-3sS-cut\textsubscript{IA}
I am cutting the fish which is very big.

boy cat 3sS-sleep\textsubscript{IA} 3sO-3sS-see\textsubscript{IA}
The boy is looking at the cat that is sleeping.

(28) Ts'eyekeyaz [dune ujun-a] yuba sootni yuk'entsui.
girl man 3sS-sing\textsubscript{PA}-rel him-for 1sO-3sS-tell 3sO-3sS-cares\textsubscript{IA}
The girl likes the man who was singing.

(29) John [nahbai lhi yenlhoh-i] yuzchi'i.
John weasel dog 3sO-3sS-bite\textsubscript{PA}-rel 3sO-3sS-shoot\textsubscript{PA}
John shot the weasel that bit the dog.\textsuperscript{6}

4.3. Head = subject; RC is oblique object of matrix

- Presently, no examples of this type have been collected.

4.4. Discussion

- I am assuming that these RC heads are internal to the clause, but based on these examples, one could equally argue for external heading., e.g.

(30) John nahbai [____ lhi yenlhoh-i] yuzchi'i.
John weasel dog 3sO-3sS-bite\textsubscript{PA}-rel 3sO-3sS-shoot\textsubscript{PA}
John shot the weasel that bit the dog.

\textsuperscript{5}The word \textit{inle} is a particle that sometimes follows a verb in the imperfective, and usually indicates imperfective actions in the past. It is often glossed as ‘used to’.

\textsuperscript{6}Note that in Dakelh there are three different verb stems used for English ‘bite’: -gus means to snap at without actually biting down, -ch'ulh means to bite (but not hard enough to kill) and -lhoh means to bite down and seriously injure or kill.
One test that can be used to discern internal vs. external heading involves the placement of adverbials which must be internal to the relative clause.

In a simple SOV sentence, the usual position for time adverbials is in sentence-initial position, preceding the subject.

(31) *Hulhda nahbai lhi yuzgus.
yesterday weasel dog 3sO-3sS-bite$_{PA}$
The weasel bit the dog yesterday.

This can be used as a positive diagnostic for internal headedness; due to the fact that the adverbial, modifying the verb, is at the left edge of the clause, any NP following it must be clause-internal.

Alternatively, the adverbial (shown in italics) may occur after the subject or object.

(32) Nahbai *hulhda lhi yuzgus.
weasel yesterday dog 3sO-3sS-bite$_{PA}$

(33) Nahbai lhi *hulhda yuzgus.
weasel dog yesterday 3sO-3sS-bite$_{PA}$

Although both of these orders are accepted as grammatical by speakers, they prefer sentences where the adverbial is sentence-initial.

The sentence is ungrammatical when the adverb follows the verb.

(34) *Nahbai lhi yuzgus hulhda.
weasel dog 3sO-3sS-bite$_{PA}$ yesterday

To use this test with relative clauses, we begin with cases where the head is subject and the RC is object of the matrix clause.

Here, the time adverbial usually appears initially within the relative clause, preceding the subject.

(35) Brenda [hulhda ts'ekë lhes huba sulht'e] 'andidtzen k'elhaooteelhtsilh.
yesterday woman bread them-for 3sS-bake$_{PA}$ today 3sS-pay$_{FA}$
Today Brenda will pay the woman who baked the bread yesterday.

tomorrow John [yesterday woman us-for 3sS-sing$_{PA}$] 3sO-3sS-meet$_{FA}$
Tomorrow John will meet the woman who sang yesterday.

These examples indicate that the head must be internal to the RC.

But, as in simple sentences, it is possible to move the adverbial further within the clause.
(37)  John [nyugah ts'ekte bunt'e Vancouver teyalh] yuk'entsui.  
John that woman tomorrow Vancouver 3sS-go$_{FA}$ 3sO-3sS-care$_{FA}$  
John likes the woman who's going to Vancouver tomorrow.

- In this case, the analysis is inconclusive; the head may be external rather than internal, or the head may still be internal, with the adverb moved to a lower position in the clause.
- In RCs where the head is the subject (and the RC = subject of matrix clause), a time adverbial internal to the RC is placed after the subject.

(38)  [Ts'ekteyaz bunt'e Vancouver teyalh] nanesti.  
girl tomorrow Vancouver 3sS-go$_{FA}$ 3sS-sleep$_{IA}$  
The girl who is going to Vancouver tomorrow is sleeping (now).

(39)  [Duneyaz bunt'e bunk'ut nutebe] tazul ts'iyawh yanyi.  
boy tomorrow lake-on 3sS-swim$_{FA}$ soup all 3sO-3sS-eat$_{PA}$  
The boy who is going to swim (on the lake) tomorrow ate all the soup.

(40)  [Dune bunt'e ka'tetilh hulhda] neghoh inte.  
man tomorrow 3sS-hunt$_{FA}$ yesterday us-near 3sS-sleep$_{PA}$  
The man who's going hunting tomorrow slept at our house yesterday.

(41)  [Ts'ekte hulhda dula sut'us] yoobedayun ts'un teyalh.  
woman yesterday refl-hand 3sS-cut$_{PA}$ doctor to 3sS-go$_{FA}$  
The woman who cut her hand yesterday will go to the doctor.

- Because the adverbial modifies only the relative clause, it itself is internal to the clause. Since it follows the subject, when the preferred position in a simple sentence is preceding the subject (at the edge of the clause), this may provide evidence that the subject head is actually external.

(42)  Ts'ekte [__ hulhda dula sut'us] yoobedayun ts'un teyalh.  
woman yesterday refl-hand 3sS-cut$_{PA}$ doctor to 3sS-go$_{FA}$  
The woman who cut her hand yesterday will go to the doctor.

- But, since the head is subject of the relative verb (which occurred yesterday) as well as the subject of the matrix verb (which occurs in the future), perhaps this order is the only one possible, in order to avoid a “garden path” sentence where ‘yesterday’ is understood to modify both verbs. Further research is required.
- To summarize, when the head of a RC is the subject, the relative clause exhibits SOV order. Because of this order, it is more difficult to determine whether the head is internal or external, but evidence from the placement of time adverbials suggests that both possibilities exist.
5. Relative clauses with oblique object as head

5.1. Head = oblique object; RC is subject of matrix

(43)  \[ \text{Tl'ughusyaz [duneyaz \_ yucheh usda] nananghez.} \]
\begin{align*}
\text{poplar tree } & \text{boy } \text{it-under} \ 3sS-sit_{IA} \ 3sS\text{-fall}_{PA} \\
\text{The poplar tree the boy was sitting under fell over.}
\end{align*}

(44)  \[ \text{Ti [duneyaz \_ hukw'ut uya] tubeh hoolhkut suli.} \]
\begin{align*}
\text{road boy } & \text{it-on} \ 3sS\text{-walk}_{IA} \ \text{very} \ 3sS\text{-slippery}_{IA} \text{it-was} \\
\text{The road that the boy is walking on was slippery.}
\end{align*}

(45)  \[ \text{Nyugi lhti [dune lhi \_ yuzchi'i-i] nahiyilhchoot.} \]
\begin{align*}
\text{that gun man dog } & \text{3sO-3sS-shoot}_{PA} \ \text{rel} \ 3pS\text{-3sO-take}_{PA} \\
\text{The gun that the man shot the dog with was taken away.} \\
\text{(Note: no overt postposition.)}
\end{align*}

5.2. Head = oblique object; RC is object of matrix

(46)  \[ \text{Duneyaz tsettselh [uba t'lughusyaz \_ yunanalhghez] nayi'ai.} \]
\begin{align*}
\text{boy axe father poplar tree } & \text{3sO-3sS-fell}_{PA} \ 3sO-3sS\text{-find}_{PA} \\
\text{The boy found the axe that his father chopped down the poplar tree with.} \\
\text{(Note: no overt postposition, but object of null postp. incorporated on relative verb.)}
\end{align*}

○ Cf. same sentence from another speaker:

(47)  \[ \text{Duneyaz [buba tsettselh t'lughusyaz \_ nainalhghez-i] nayi'ai.} \]
\begin{align*}
\text{boy his-father axe poplar tree } & \text{3sO-3sS-fell}_{PA} \ \text{rel} \ 3sO-3sS\text{-find}_{PA} \\
\text{The boy found the axe that his father chopped down the poplar tree with.} \\
\text{(Note: no overt postposition.)}
\end{align*}

(48)  \[ \text{Lhti [unye' duni \_ yusuch'i] sghanintan.} \]
\begin{align*}
\text{gun your son moose } & \text{3sO-3sS-shoot}_{PA} \ 1sO\text{-2sS-give}_{PA} \\
\text{You gave me the gun that your son shot the moose with.} \\
\text{(Note: no overt postposition.)}
\end{align*}

○ Cf. similar sentence from another speaker:

(49)  \[ \text{[Nyun nyugi lhti sghanintan-i] sye' duni yuzelhghui \_ i be.} \]
\begin{align*}
\text{you that gun } & \text{1sO\text{-2sS-give}_{PA} rel my-son moose } \text{3sO-3sS-kill}_{PA} \ \text{it with} \\
\text{You gave me the gun that my son killed the moose with.}
\end{align*}

(50)  \[ \text{[Uloo nalhti uyinla-i] lhi yeyoh nanul'i.} \]
\begin{align*}
\text{mother blanket } & \text{3sO-3sS-make}_{PA} \ \text{rel dog it-under} \ 3sO-3sS\text{-hide}_{IA} \\
\text{My mother made the blanket that the dog is hiding under.}
\end{align*}
5.3. **Head = oblique object; RC is oblique object of matrix**

- Presently I do not have examples of this type.

5.4. **Discussion**

- The usual position for postpositional phrases within a simple SOV sentence is following the object NP, preceding the verb.

> (51) Lubudak tes be nulht'oos.
>     potatoes knife with 3sO-3sS-peel$_{IA}$
>     S/he is peeling potatoes with a knife.

- Nevertheless, as is the case with adverbial phrases, the PP may also occur in other positions preceding the verb, but it is considered ungrammatical following the verb.

- Based on the examples above, a head oblique object may occur internal or external to the RC.

- As can be seen from several of the examples, the governing postposition is often left out.

- When present, the postposition can occur with pronominal object agreement (as in 43, 44, 50), rather than directly governing the noun.

- The postposition may also appear following the verb with a resumptive pronoun (as in 49), which is not an expected position, and thus seems to be an afterthought.

- There are several difficulties in eliciting sentences where an oblique object is the head.

- Often an oblique clause in English does not have an oblique counterpart in Dakelh.

- For example, in some cases, the oblique meaning is part of the verb stem e.g. ‘to live in’. In other cases, the English oblique appears as an incorporate on the verb e.g. ‘to fall into (a liquid)’.

- As a result, I was unable to obtain many examples of oblique object relatives in my last fieldwork trip; this issue is left for further research.

6. **Dakelh within Athapaskan**

6.1. **Headedness**

- As outlined in section 1, the position of the head noun with respect to the relative clause varies in languages across the family.

- In Navajo, a language from the Southern branch of the family, the head noun may either precede (as in 52) or follow (as in 53) the relative verb.
(52) **Ashkii ālhoš-ígíí āl hàą.**  
boy imp:3:sleep-REL imp:3:snore  
The boy who is sleeping is snoring.

(53) **Ālhoš-ígíí ashkii āl hàą.**  
imp:3:sleep-REL boy imp:3:snore  
The boy who is sleeping is snoring.

- According to Platero (1974), example (52) is the preferred type of RC in Navajo, and he assumes the head is internal to the clause based on evidence from time adverbials internal to the clause, which occur initially in the clause, preceding the NP.
- Platero labels this type of RC “forward deletion”. This is based on the assumption that the head noun phrase actually follows the RC, and is deleted under identity with the NP ‘boy’ initial in the clause.
- The second type of RC, illustrated in (53), is termed “backwards deletion” by Platero. He assumes the head noun surfaces in the same position as it holds underlyingly, external to the clause.
- To summarize, Navajo exhibits both internally-headed and externally-headed RCs. In the latter case, the head noun follows the RC.
- Of the Northern Athapaskan languages where relative clauses have been studied, both internally-headed RCs, and externally-headed RCs (with the head preceding the clause) exist, e.g. in Slave (Rice 1989, 2003) and Dogrib (Saxon 2000).
- Saxon (p.c.) also reports that in Dogrib, RCs exist where the head follows the clause, similar to the Navajo example in (53) above, although these types of constructions are used in a “characteristic” or more lexicalized sense.
- In the examples from Dakelh, shown in sections 3-5, there are numerous examples of internally-headed RCs parallel to the Navajo example in (52), and externally-headed RCs with the head preceding the clause, as in other Northern languages.
- When examples were presented in Dakelh with the head following the RC, as in the Navajo example in (53), all speakers found them to be ungrammatical (with rather strong judgments).
- Dakelh thus patterns most closely with the other Northern languages, although RCs differ in some ways, as we will see in section 6.3.

### 6.2. Extraposition

- It has been reported for Navajo (e.g. Platero 1974, Perkins 1982) that a relative clause may be “extraposed” to the end of the sentence, following the matrix verb.

(54) **Ashkii at’ééd yoo’į hashtlįsh yii yílizheę.**  
boy girl he-sees-her mud into-it he/she-fell-REL  
‘The boy who fell into the mud sees the girl.’  
‘The boy sees the girl who fell into the mud.’
Since the extraposed relative clause [hashlǐsh yiîh yîtlizheŋ] can refer to either the subject or the object, the reading of the sentence is ambiguous.

When Dakelh speakers were presented with sentences with extraposed RCs, they did not consider the sentences to be completely ungrammatical; although “you could understand”, it’s not “perfect” and “that's not the normal way to say it”.

Nevertheless, two examples with extraposed RCs were produced during elicitation sessions, as shown in (55-56).

(55) John nuygi khoh ghez yanyi, [ts'eke yoodulhtoh-i].
John those goose eggs 3sO-3sS-eat<sub>pA</sub>, woman 3sO-3sS-count<sub>pA-rel</sub>
John ate the goose eggs that the woman counted.

(56) John duba belhti be nahbai yuz ch'i, [lhi yenlhoh-i].
John refl-father his-gun with weasel 3sO-3sS-shoot<sub>pA</sub>, dog 3sO-3sS-bite<sub>pA-rel</sub>
John shot the weasel that bit the dog with his father's gun.

Thus, while not preferred, extraposed RCs appear to possible, especially in long sentences.

6.3. Pronominal object agreement

Another factor which comes into play in RCs is whether or not the verb of the relative clause requires pronominal agreement (in person and number) with the head noun.

Some languages always require such agreement, such as Koyukon (Thompson 1996).

Other languages require agreement only if the head noun is positioned external to the RC, such as Slave (Rice 1998, 2003) and Dogrib (Saxon 2000).

I will illustrate with examples from Slave.

In Slave, like in many of the Northern languages, third person pronominal object agreement is in complementary distribution with overt NPs.

(57) yehtsi 's/he is making it' (Rice 1989:628)
ts'ah hehtsi 's/he is making a hat'

Where there is no overt NP, the object pronoun ye- appears on the verb. With an NP present, no pronominal object marking occurs.

Slave permits both internally- and externally-headed RCs.

In externally-headed clauses, the usual agreement facts do not hold; nominals and agreement are not in complementary distribution.
Syntax of the World's Languages (SWL 1)

(58) direct object as head (Rice 2003:55)

a. internally headed

[seyaa [ńue] ńaníhdé] sį̱ meghánila
1SG.POSS-son fish 3.S-PF-kill PL COMP 1SG.S-PF-give.PL-b.OO
“I gave him the fish that my son caught.”

b. externally headed

[ńue] [seyaa ńayéńíhdé] sį̱ meghánila
fish 1SG.POSS-son 3.S-PF-kill PL COMP 1SG.S-PF-give.PL-b.OO
“I gave him the fish that my son caught.”

○ In (a.), the nominal ‘fish’ is present within the RC, and no agreement is marked on the relative verb.

○ In (b.), however, the nominal ‘fish’, although present, is external to the clause, and agreement is marked on the relative verb.

○ In Dakelh, the facts are slightly different.

○ Like in Slave, pronominal object agreement is required when no nominal object is present, as shown by the yu- prefix in (59a.) below.

(59) a. Yunulhlhus. ‘S/he is kneading it.’

*Nulhlhus.

b. Lhes Yunulhlhus. ‘S/he is kneading (the) dough.’

Lhes nulhlhus.

○ When there is a nominal present, pronominal object agreement is still usually preferred, although it does not always occur, as in (b.)

○ What exactly determines the presence of this prefix is still unclear and awaits further research, but one plausible theory is that it marks the definiteness of the object (Bill Poser, p.c.).

○ The closest neighbouring language to Dakelh, Witsuwit’en, exhibits such agreement patterns, and these are argued to be due to a definiteness effect. (See Gunlogson 2001.)

○ As for relative clauses, it seems to be the case that Dakelh always requires pronominal agreement on the verb of the relative clause, whether or not an nominal object is present, and whether or not that nominal is internal or external to the clause. I repeat examples (60) and (61) from above.

(60) [Nahbai lhi yuzgus-i] too lhai yutnai.
weasel dog 3SO-3S-bite_rel water much 3SO-3S-drink_rel
The dog that the weasel bit drank a lot of water.
John dog man 3S-3S-kick_{PA} 3S-3S-see_{PA}  
John saw the dog that the man kicked.

- When RCs were presented to speakers without the object marking on the relative verb, the sentences were judged to be ungrammatical.
- If it is true that yu- object marking correlates with the definiteness of a noun, it would not be surprising that relative clauses require such agreement, since the head noun of a relative clause is always definite.
- There were, however, some exceptions to this generalization.
- The following two sentences were found in data from several years ago, and do not show pronominal object marking on the verb of the relative clause.

(62) Ts’ekte [bu-kui kohoh su-ch’i-i] yu-yez  
woman her-husband goose prf-3S-3S-shoot_{PA}-rel 3S-3S-pluck_{IA}  
‘The woman is plucking the goose that her husband shot.’

(63) [Sus hu-su-lh-ghui-i] hu-yu-lh-gui  
bear 3pS-prf-val-kill_{PA}-rel 3pS-3SO-val-dry_{PA}  
‘They dried the bear that they killed.’

- When rechecked with the speakers, all found these to be grammatical, even without the object marking, although they provided alternatives with the object marking.

(64) Ts’ekte [bu-kui kohoh yu-z-ch’i-i] yu-yez  
woman her-husband goose 3SO-prf-3S-3S-shoot_{PA}-rel 3SO-3S-pluck_{IA}  
‘The woman is plucking the goose that her husband shot.’

(65) [Sus h-i-ze-lh-ghui-i] hu-yu-lh-gui  
bear 3pS-3SO-prf-val-kill_{PA}-rel 3pS-3SO-val-dry_{PA}  
‘They dried the bear that they killed.’

- It is unclear why these particular verbs constitute exceptions; the issue remains one for future research.

7. Summary

- This paper is a preliminary investigation into the previously undocumented topic of relative clause structures in Dakelh Athapaskan.
- Sections 3-5 have laid out the generalizations arising from the various types of RCs, and have identified gaps in the data where they exist.
When the head of an RC is the object (section 3), the head may be internal to the RC, maintaining canonical SOV order, or external to the clause, resulting in OSV order. However, many factors come into play which may affect the order of arguments or the interpretation of the sentence. These include potential for ambiguous interpretations, discourse context, and logical relation between predicates.

In sentences where the head of a RC is the subject (section 4), the relative clause exhibits SOV order. Because of this order, it is more difficult to determine whether the head is internal or external, but evidence from the placement of time adverbials suggests that both possibilities exist, as in the cases where object is head.

As for RCs where an oblique object is head (section 5), these may also be headed internally or externally. A governing postposition may or may not be present, and if present, it is usually inflected for agreement. Many questions remain concerning this type, and this will be a focus of future research.

In section 6, I compared the Dakelh data with findings for other languages within the Athapaskan family. There are three main considerations:

i. Headedness. Like other languages, Dakelh permits internal or external heading, but unlike Navajo and Dogrib, an external head cannot follow the RC.

ii. Extraposition. In Navajo, one can commonly find RCs at the end of the sentence, following the matrix verb. In Dakelh, speakers judge extraposed RCs to be abnormal, though understandable, and two examples were produced in the data.

iii. Pronominal object agreement. In some of the Northern languages, pronominal object agreement is required on the verb of the RC, only if the head of that RC is external. Other languages always require such pronominal agreement; this is generally the case in Dakelh, and may be a result of more general rules governing pronominal argument agreement.

Much remains for future research, including the investigation of stacked relatives in Dakelh (reported for Dogrib; Saxon 2000), and developing a formal analysis of the relative clause construction.
References


Appendix A: Dakelh Orthography Key

Dakelh Consonant Inventory

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<tr>
<td>Unasp. Stop</td>
<td>b /b̬</td>
<td>d /d̬</td>
<td>g /g̬</td>
<td>g⁹ /g⁹ /' / ̥/</td>
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<td>Asp. Stop</td>
<td>(p) /p̬ /</td>
<td>t /t̬ /</td>
<td>k /k̬ / k⁹ /k̥ /</td>
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<td>k’ /k̥ / kw’ /k̥ /</td>
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<td>j /d̬ /</td>
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<td>ts’ /t̥ / tl’ /t̥ /</td>
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<tr>
<td>Vless Fric.</td>
<td>(f) /f /</td>
<td>s /s /</td>
<td>lh /l̥ /</td>
<td>sh /ʃ / kh /x / wh /x̆ / h /h /</td>
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<td>Vd. Fric.</td>
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<td>ny /ŋ / ng /ŋ /</td>
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Dakelh Vowel Inventory

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<td>o /o/</td>
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<tr>
<td>Low</td>
<td>a /a/</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7 Abbreviations are as follows: Unasp. = unaspirated; Asp. = aspirated; Glott. = glottalized; Vless. = voiceless; Vd. = voiced; Affr. = affricate; Fric. = fricative; Approx. = approximant; Alveol. = alveolar; Laryn. = laryngeal.