The Data Pattern of Relative Clauses in Nawdm

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1 Purpose

This paper will attempt to lay out the fundamental characteristics of relative clauses in Nawdm their distribution, internal order, morphological and phonological features. The goal will not be to explain these characteristics, as a detailed analysis of any of the characteristics of the data would preclude description of some other part of the data, for reasons of space. To be investigated are the possible sites for extraction of the heads of relative clauses, the distribution of resumptive pronouns and subject clitics in relative clauses, the distribution of "n" (a particle that appears in relative clauses), and the characteristics and distribution of relative pronouns.

2 Possible Sites for Extraction

Heads of relative clauses can be extracted from the object of a verb 1 :

(6-21) dáw màndé wà?dègè dèndě:n wě: lògrá mà wàdègá man I-then hit yesterday he-specific take-perfect my book The man I hit yesterday took my book

In (6-21) "man" is extracted from the object position of the verb "hit." Extraction from subject position is also possible²:

(402) mà dé wà?(à)dègè dáw á dé bùgèdègè bòdòbòdò dèndĕ:n wí:
 I then hit-perf man he then burn-perf bread yesterday he-specific
 I hit the man who burned the bread yesterday

In (402) "man" is extracted from the subject position of the verb "burn." Extraction from the object of a postposition is possible:

(405) mà dé d(è)rá bòdòbòdò fêmbè n dé kàdè ?ò dʒúgún ?ó:
I then eat-perf bread fembe n then sit-imp it-bread above it-bread-specific
I ate the bread on which the fembe was sitting.

Here "bread" is extracted from the object of the postposition "on" ($d_{3}ugun$). There seems to be only one instance of a preposition in Nawdm: n ("with"). Unfortunately no attempt has yet been

¹Examples numbered with an initial number, a dash, and a final number are taken from my session notes. For example, item (6-21) is the sentence numbered (21) in session 6.

²Examples numbered with a single number are taken from the class notes.

made to determine whether extraction is possible from the object of n. Extraction is also at least somewhat possible from adjuncts:

- (407) ándć bò:lè kóféŋgà: tǐ: dè dʒàrèŋgè má he-n-then burn-perf village-the it-manner-specific then bother-perf me The way he burned the village bothered me.
- (410) ámbá: dʒùm bòdòbòdò lě: mà bâ: dên búgódègěm á kóféŋgá he-n-will eat bread it-time-specific I will den burn his village
 While he is eating the bread I will burn his village.

(407) shows extraction from a manner adjunct, and (410) from a time adjunct. No equivalent data has been elicited for place adjuncts. In these examples there is no heads of the relative clauses, although there seem to be implicit heads ("the way" in (407) and "the time" in (410)). Either object of a ditransitive verb can be extracted:

- (404) mà dź wà?(à)dègè dâw ándź ¹tó bòdòbòdò wǐ: I then hit-perf man he-n-then give bread he-specific I hit the man to whom he gave the bread.
- (8-5) mà dé bùgàdègé bòdòbòdó màndé tò sámbà ?ŏ:
 I then burn-perf bread I-n-then give Samba it-bread-specific
 I burned the bread I gave to Samba.

(404) shows extraction of "man" from the indirect object position of "give," and (8-5) shows extraction of "bread" from the direct object position of the same verb. Relative clause heads can be extracted from the object position in embedded questions and embedded statements:

- (8-14) bòdòbòdó màŋ gbámá mà hén mî:nà béndé [!]bógòdègè ?ǔ: dè bé lè bread I-n ask my self whether you-n-then burn it-bread-spec then be ? mègò tasty
 The bread I wonder whether you burned was tasty.
- (577) búrúgú bèn dílá ná mà(n)dź tòg>d>gè kǔ: dʒǔn mó:té goat you-n think that I-(n)-then attach cl-spec eat-imp grass The goat you think I attached is eating grass.

In (8-14) "bread" is extracted from "whether you burned," and in (577) "goat" is extracted from "you think I attached." Extraction is also possible from the subject position of embedded statements:

(9-13) dáw màn dź mì ná à tògàdègè bùrùgú wě: bź hòm man I-n then thought that he attach goat cl-spec is nice The man I thought attached the goat is nice.

Unfortunately there has been no test of whether extraction is possible from the subject of an embedded question. My guess based on the rest of the relative clause data is that it is not possible. Moving on, extraction is possible from a possessor:

(409) mà d\u00e9 w\u00e1?(\u00e9)d\u00e9 d\u00e9 w m\u00e9nd\u00e9 [!]b\u00e9:l\u00e9 \u00e9 k k\u00e3f\u00e9ng\u00e4 w\u00e9:
I then hit man I-n-then burn-perf his village he-specific I hit the man whose village I had burned.

There has been no direct test of the extraction of an object possessed by a single possessor, but I believe that this is not possible on the basis of the following example,

(9-11) Can't say "these are the people I burned five villages of and two houses of."

which shows that extraction is not possible from the object of conjoined possessors. This sentence is not ruled out on the basis of the conjunction, as extraction from the object of conjoined VPs is possible:

- (9-12) búrú?én éná? né màn dé wà?àré ń tógé goat-pl-n this-pl copula I-n then beat with attach These are the goats I beat and attached (simultaneously).
- (9-14) búrúgú màn dé tògàdègé n téwàlègé fêmbè kò dzúgún kó: dzún mó:té goat I-n then attach with put-on fembe it-goat on-to cl-spec eat grass The goat I attached and put the fembe on is eating grass.

In (9-12) and (9-12') extraction is from the object position of two conjoined simple VPs, and in (9-14) one of the two VPs selects a prepositional phrase (actually, a postpositional phrase), and extraction there is from the object of that prepositional phrase. The final case where extraction is possible is parasitic gaps. That is, extraction can form parasitic gaps:

(9-7) bòdòbòdó ?òná?à né màm bâ: dé kà à bé bólè ?ŏ:
bread cl-this copula I-n would eat if he would-not burn cl-spec
This is the bread I would eat if he wouldn't burn (it).

In (9-7) "bread" is the object of both "eat" and "burn." The pronoun 20 ("it" referring to bread) is not allowed in either object position.

Extraction is not possible from the subject position of an embedded relative clause:

(8-8) * "I hit the man₁ I burned the bread t_1 /he₁ ate"

It is also not possible from within the subject position of an embedded relative clause:

(8-12) Cannot express "the dog₁ that the man with t_1/it_1 beat my mother ate the bread."

It is also not possible to extract from two relative clauses simultaneously:

(9-2) * bodobodo ?o ran pare ?o: andɛ bole ?o: bread it comes-from Paris cl-spec he-n-then burned cl-spec the bread from Paris that he burned.

Example (9-2) would literally mean "the bread that comes from Paris that he burned," if it could be said. Finally, it is not possible to extract a DP from the object position of a clause where the subject is modified by a relative clause³:

³This example was elicited in class, but never written up.

(X) Cannot translate "I ate the bread that the evil man who beats fembes burned."

3 Resumptive Pronouns and Subject Clitics

Nawdm employs resumptive pronouns in some, but not all, of the cases of extraction. As can be seen from example (6-21) above, it does not employ them in the case of object extraction. However, resumptive pronouns do appear when objects of postpositions are extracted, as in (405) (previous section) and in the following:

(8-11) búrúgú màndé lò fêmbè kó dʒúgún kú: dzŭn mó:té goat I-n-then put Fembe it-goat on it-goat-spec eat-imp grass The goat I put the Fembe on is eating grass.

In (405) the resumptive pronoun was 20, referring to "bread", and in (8-11) it is k0, referring to the goat. (8-11) more or less literally reads "the goat I put the fembe on it is eating grass." (9-14) from the previous section shows that even when a noun is simultaneously extracted from the object position of a verb and the object position of a postposition, the resumptive pronoun only occurs in the object of the postposition.

Resumptive pronouns also occur when a possessor is extracted, as shown in example (409) from the previous section, which literally reads (adjusted for English word order) "I hit the man who I burned his village." Finally, the case could be made that extraction from subjects leaves resumptive pronouns. Relative clauses from which the subject has been extracted always have pronominal subjects:

- (399) mà dé wà?(à)dègè dáw á ýkè búgédá bòdòbòdò wǐ:
 I then hit-perf man he usually burn-imp bread the-man-specific
 I hit the man who usually burns the bread.
- (402) mà dé wà?(à)dègè dáw á dé bùgèdègè bòdòbòdò dèndĕ:n wí:
 I then hit-perf man he then burn-perf bread yesterday he-specific
 I hit the man who burned the bread yesterday.
- (9-1) bòdòbòdò ?ó rán pàré ?ŏ: bread it comes-from Paris cl-spec the bread from Paris
- (9-13) dáw màn dé mì ná à tògàdègè bùrùgú wě: bé hòm man I-n then thought that he attach goat cl-spec is nice The man I thought attached the goat is nice.

Here (399) and (402) show resumptive pronouns in different tenses for extraction of animate subjects, (9-1) shows extraction of an inanimate subject, and (9-13) shows extraction from an embedded clause, all of which employ subject pronominals. However, the subject of relative clauses with object extraction can be a full DP,

(396) mà dé bòlé bòdòbòdò bà hź:là gŏ: ndé d(è)rè ?ŏ:
I then burn-perf bread dog black it-dog-specific n-then eat-perf it-bread-specific
I burned the bread the big black dog ate.

so it is not the case that verbs in relative clauses must have pronominal subjects. On the other hand, there does seem to be an increased necessity for pronominal subjects in relative clauses to some extent. Second person singular subjects are normally dropped in main clauses:

 (80) jénà wé see-perf him
 You have seen him.

However, in relative clauses they are mandatory:

(7-2) mà dé d(è)rá bùrùgú bèndé wá?(á)dègè kŏ: èn wágèbě:
I then eat-perf goat you-n-then hit it-go-specific and snake-specific
I ate the goat you attached and the snake.

It has been argued that there are syntactic similarities between possessor positions and subject positions. Thus, the fact that resumptive pronouns occur with extracted possessors lends support to the position that the pronouns in extracted subject positions are resumptive pronouns.

One instance in which subject pronouns in relative clauses (and in main clauses in the same way) appear to act as clitics (that is, they exhibit clitic doubling) rather than as resumptive pronouns is in the case of relative clauses with object extraction where the subject of the clause is a conjunction of two pronouns:

- (7-3) dé drà bòdòbòdó wé n má téndé bò:lè ?ŏ:
 then eat-perf bread he and/with I we-n-then burn-perf it-bread-specific
 You ate the bread he and I burned.
- (7-4) dé drà bòdòbòdó má né n wé téndé bò:lè ?ŏ:
 then eat-perf bread I ? and/with he we-n-then burn it-bread-specific
 You ate the bread I and he burned.

In (7-3) "he and I" is doubled as "we", and similarly in (7-4) for "I and he." However, if one of the conjoined subjects is a non-pronominal, clitic doubling does not occur:

- (7-12) kóféngá sámbà m mán dé bò:lè kě: bè pò?(ò)
 village Samba and I-n then burn-imp it-village-specific be close
 The village Samba and I burned is close.
- (7-13) kóféngá má né ň sámbà ň dé bò:lé kč: dè bè ná fém?è
 village I ? and Samba n then burn it-village-specific then be na fembes'
 kálàmbè?ègá
 bad-place

The village I and Samba burned was a bad place for fembes.

4 The Distribution of the Particle "n"

As can be seen from the examples of section 2, a particle pronounced as a consonantal nasal homorganic to the following consonant and defaulting to /n/ appears immediately after the subject of relative clauses in which any extraction other than subject extraction has taken place. This particle forms a phonological unit with pronominal subjects. That is, when preceded by pronominal

subjects, it always forms the coda of a syllable initiated by the pronoun by which it is preceded. In addition, it always bears the tone of the vowel immediately preceding it. Some examples will be necessary to show that the appearance of /n/ does not depend on tense, aspect, or whether the relative clause modifies the subject or object of the main clause.

- (6-21) dáw màndé wà?dègè dèndě:n wě: lògrá mà wàdègá man I-then hit yesterday he-specific take-perfect my book
 The man I hit yesterday took my book.
- (6-22) dèndě:n dé tùgèdègè bùrùgú màndé lègrè ků:
 yesterday then attach-perfect goat I-then take-perfect it-specific
 Yesterday you attached the goat I took.

(6-21) and (6-22) show that the grammatical function of the head of the relative clause within the main clause is not relevant to the appearance of /n/.

- (397) mà dé tùgàdègè búrúgú á ýkà túgédá kú: I then attach-perf goat he usually attach-imp it-goat I attached the goat he usually attaches.
- (400) mà ń dèrà bòdòbòdò á ń bùgàdègè átàkfárèn dèná? ?ó:
 I recent-past eat-perf bread he n burn-perf morning this it-bread-specific (This afternoon) I ate the bread he burned this morning.

In (397) and (400) there is no sign of /n/ even though an object has been extracted, but this is most likely due to the fact that the verbal auxiliaries employed in these sentences begin with nasals, thus rendering the /n/ particle impossible to detect.

- (401) mà bâ: dé bòdòbòdò ámbá: búgódègè ?õ:
 I will eat bread he-n-will burn it-bread-specific
 I will eat the bread he will burn
- (7-8) mà wá?ádá búrúgú bèn tógódá bêlgá kö:
 I hit-imp goat you-n attach-imp now it-goat
 I am hitting the goat which you are attaching right now.
- (7-9) mà wá?ádégé búrúgú bèn tógódégé hóhó kó:
 I hit-perf goat you-n attach-perf already it-goat-specific
 I (have) hit the goat which you have already attached.
- (7-10) mà hấŋé bùrù hólờ gó màndâ: tógódá kó:
 I forgot goat black "go" I-n-? attach-imp it-goat-specific
 I forgot which black goat I was attaching.
- (9-3) à dè bò:lé bòdòbòdó màndă: dʒú ?ó: he then burn bread I-n-habit eat-imp cl-spec He burned the bread I usually eat.
- (9-4) à bâ: ¹bólè bòdòbòdó màm bá: dén dʒùm ?ó: he will burn bread I-n will den eat-m cl-spec He will burn the bread I will be eating.

- (9-5) mà lógórá bòdòbòdó àn dzúwà dzú?ó ?ŏ:
 I take-perf bread he-n eat eat-? cl-spec
 I have been taking the bread that he has been eating and eating.
- (9-6) mà d\u00e9 d\u0

Here (401) shows that /n/ appears in the future perfect, (7-8) in the present imperfect, (7-9) in the perfect, (7-10) in the recent past imperfect (although this case suffers from the same problems as (397) and (400)), (9-3) in the habitual, (9-4) in the future imperfect, (9-5) in the perfect continuative⁴, and (9-6) shows that it appears in the conditional. Thus it appears that tense and aspect do not discourage /n/ from appearing, and that /n/ always appears before any other verbal particles.

No tense or aspect allows /n/ to appear when subjects have been extracted, nor does the status of the head noun as subject or object of its main clause affect the non-appearance of /n/, as the following examples show:

- (402) mà dź wà?(à)dègè dáw á dź bùgèdègè bòdòbòdò dèndě:n wí:
 I then hit-perf man he then burn-perf bread yesterday he-specific
 I hit the man who burned the bread yesterday.
- (403) dáw á dé bùg>dègè kóféŋgà: wĭ: dé wà?(à)dègè má man he then burn-perf village-the he-specific then hit-perf me The man who burned the village hit me.
- (406) mà bâ: wá?(á)dègè pídá á bá: búgédègè bòdòbòdò?ò wí:
 I will hit person he will burn bread-specific he-specific
 I will hit the man who will burn the bread.

In (402) and (403) the tense is distant past, perfective aspect, and in (402) the relative clause modifies the object, whereas in (403) the relative clause modifies the subject. In (406) the tense is future.

A small amount of speculation might be appropriate on the question of why /n/ has the distribution that it does. The same particle seems to appear in some conditional and subjunctive sentences outside of relative clauses, as in the part of (9-6) that translates to "if I hadn't eaten it." My suggestion would be that /n/ is a verbal auxiliary indicating some sort of subordinating mood, and by virtue of its required placement within the syntactic structure, and the required placement of resumptive pronoun subjects, about neither of which I will speculate here, it is incompatible with resumptive pronouns in subject position, although it is not incompatible with full DP subjects or clitic subjects.

5 Relative Pronouns

From examples (6-21) and (6-22) in section 2, it can be seen that relative pronouns appear at the end of relative clauses, and that they correspond to the pronominal forms of the heads of the relative clauses. The following example seems to indicate that the relative pronoun is formed from the subject pronoun, as does (6-22):

⁴This term was used in Gimba's session notes.

(7-12) kóféŋgá sámbà m mán dé bò:lè kě: bè pò?(ò)
 village Samba and I-n then burn-imp it-village-specific be close
 The village Samba and I burned is close.

On the other hand, (6-21) appears to use the object form. However, we has also occurred once or twice as a subject form, for example in (7-3), so it seems most likely that the relative pronoun is derived from the subject form. In cases of extraction from a time adjunct, as in (410), there is no head of the relative clause, and the relative pronoun is the non-specific pronoun "le," as in the following⁵:

(163) mán lé I-copula it it's me.

I do not know the source of the pronoun used with manner extraction (example (407)).

When the head of a relative clause consists of conjoined DPs from different noun classes there is some confusion on the part of the speaker as to how to decide which relative pronoun to use. The first elicitation of examples with this characteristic yielded the following result:

- (412) mà d ϵ d (ϵ) ri bùrùgi wág(i)bi wág(i)bi wág(i)di wág(i)d
- (413) mà dé d(è)rá wág(à)bé mà bùrùgú bèndé wá?(á)dègè tǐ:
 I then eat-perf snake and/with goat you-n-then hit them-goat-specific I ate the snake and goat you hit.

The relative pronoun chosen, with some difficulty, was the plural form of the pronoun corresponding to "goat", regardless of the order of "goat" versus "snake." However, the consultant also indicated that the relative pronoun "?ē:" (corresponding to "snake") would be possible as well, although dispreferred. At the next consultation session, however, the consultant decided that the appropriate renderings of (412) and (413) should be as follows:

Here the relative pronoun is the same pronoun that would have been used if the head had just been the second conjunct. If both conjuncts of the head are from the same noun class, there is no difficulty. The plural form of the pronoun for that noun class is used:

(7-1) mà dé d(è)rá bùrùgú mì bà:gò bèndé wá?(á)dègè tǐ:
I then eat-perf goat and/with dog you-n-then hit them-go-specific
I ate the goat and dog you hit.

⁵The pronoun "*le*" has been transcribed by different people as having either the vowel [ϵ] or the vowel [ϵ], as has the corresponding relative pronoun.

In all these cases the relative pronoun is obligatorily present. However, when the relative clause modifies the subject of the main clause and the same problem occurs, the preferred solution is to omit the relative pronoun. If forced to include it, the solution of (412') and (413') is chosen:

(7-5) búrúgú ỳ wágèbé bèndé tògòdègé (bǐ:) dʒún má goat and/with snake you-n-then attach-perf (it-snake-specific) eat me The goat and snake you attached are eating me.

Note that this choice imposes a new ambiguity. If the relative pronoun is included, (7-5) has the same form as the following:

(7-7) búrúgú j wágèbé béndé [!]tógòdègè bǐ: dʒún(ə) má goat and snake you-n-then attach-perf it-snake-specific eat me The goat, and the snake you attached, are eating me.

In (7-5) both the goat and the snake were being attached, but in (7-7) only the snake is.

With the above examples in mind, some more, although not a lot more, can be said about when relative pronouns are required, when they are optional, and when they are banned. It is not certain exactly in which contexts relative pronouns are required—in almost all cases the consultant provided them, so it seems that they are usually required. All of the cases where the inclusion of a relative pronoun is optional or banned have to do with double extraction. The examples are as follows:

- (9-7) bòdòbòdó ?òná?à né màm bâ: dé kà à bé bólè ?ŏ:
 bread cl-this copula I-n would eat if he would-not burn it-the This is the bread I would eat if he wouldn't burn it.
- (9-12) búrú?én éná? né màn dź wà?àré ń tógé goat-pl-n this-pl copula I-n then beat with attach These are the goats I beat and attached (simultaneously).
- (9-12') búrú?én éná? né màn dź wà?àré ń tź tógédégé goat-pl-n this-pl copula I-n then beat with later attach These are the goats I beat and then attached.

In (9-7), where the head has been extracted from two non-conjoined clauses, the relative pronoun is optional, and in (9-12) and (9-12'), where the head has been extracted from conjoined VPs, the relative pronoun is banned. However, in the following example of extraction from conjoined VPs the relative pronoun is not banned⁶:

(9-14) búrúgú màn dé tògàdègé n téwàlègé fêmbè kò dzúgún kó: dzún mó:té goat I-n then attach with put-on fembe it-goat on-to cl-spec eat grass The goat I attached and put the fembe on is eating grass.

Finally, when two relative pronouns would be adjacent, the second is banned:

(411) ándé dzú bòdòbòdó mándé bùgàdègè ?ö: mà dé wà?àn(é) á fêmbé he-n-then eat bread I-n-then burn it-bread-specific I then beat his fembe While he was eating the bread I burned I was beating his fembe.

 $^{^{6}}$ I do not know whether or not it is optional.

In (411) the relative pronoun "*lě*." would normally be expected immediately after the relative pronoun "*lŏ*."

The specificity of a DP that includes a relative clause is marked on relative pronoun by lengthening it. As can be seen in all of the above examples, the head noun cannot be marked for specificity. However, the possessor of a head noun can be marked for specificity:

(576) bá hól
à?
e ènnò?
è: háyá ?ànò?à ándź bò:lè č: dè bá dog1 black-cl1 cl1-five-cl1-spec house2-pl
 cl2-five-cl2 he-n-then burn cl2-spec then be mòlá red-cl2
The five black dogs' five houses he burned were red.

Oddly enough, a specific DP conjoined to a relative-clause-modified DP cannot be marked specific as well, as shown by example (7-7). It should be noted that specificity does not correspond exactly to where English would mark definite versus indefinite. For example, there is no difference in Nawdm between "a goat I attached" and "the goat I attached"—relative clauses are inherently specific:

- (397) mà dé tùgàdègè búrúgú á ýkà túgédá kú:
 I then attach-perf goat he usually attach-imp it-goat
 I attached the goat he usually attaches.
- (398) mà dé tùgàdègè búrúgú á íjkà túgédá kú:
 I then attach-perf goat he usually attach-imp it-goat
 I attached a goat that he usually attaches.

6 Summary

Thus, we have concluded that extraction can take place from the subject and object of verbs, from the object of postpositions, from adjuncts, from indirect objects and direct objects of ditransitives, from objects of embedded questions, from subject and objects of embedded statements, from objects of conjoined VPs, from parasitic gaps, and from possessors, but not from possessed objects, from two simultaneous relative clauses, from the object position of a relative clause where the subject of that clause is modified by a relative clause, or from the subject position of an embedded relative clause. We have also determined that a particle pronounced as a nasal consonant appears after the subject of relative clauses with any extraction other than from subject position, and that extraction from possessors and objects of postpositions produces resumptive pronouns. We argued that subject extraction also produces resumptive pronouns. Finally, we have characterized the relative pronoun as being derived from the subject pronominal form of the head of the relative clause and discussed when it is obligatory and when not.