INTERNAL RELATIVE CLAUSES IN TENYIDIE (ANGAMI): A CASE OF HIERARCHICAL PRECEDENCE VS. LINEAR PRECEDENCE?[1]

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1.0. INTRODUCTION

The aim of this paper is to study the nature of the internal relative clause (IRC) in Tenyidie, a dialect of Angami Naga, especially as it concerns the interplay between hierarchical order and constituent word order. We attempt to show that, although in most of the cases hierarchical as well as linear order plays a crucial role in the interpretation of an IRC in Tenyidie, there is an instance where neither plays any role at all. In support of the occurrence of an NP as the head of an IRC we provide two pieces of evidence: (i) the position of occurrence of the constituents in the embedded internal relative clause, and (ii) the presence as well as the absence of overt lexical case markers with the constituent that is being relativized.

We shall show that a constituent that is not lexically case-marked in Tenyidie can head an IRC, unlike the situation in the Quechua group of

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The transcription used in this paper is broad.

List of Abbreviations

ABL	Ablative	IRC	Internal relative clause
ACC	Accusative	LOC	Locative
AGR	Agreement marker	NOM	Nominative
AUX	Auxiliary	NOMZ	Nominalizer
COM	Comitative	OB	Other benefactive
CP	Conjunctive participial	OO	Oblique object
DAT	Dative	PP	Postpositional phrase
DEF	Definite	PRES	Present
DIM	Diminutive	PRES HAB	Present habitual
DM	Deictic marker	PROG	Progressive
DO	Direct object	PST	Past
HAB	Habitual	SG	Singular
INST	Instrumental	2	Second person
IO	Indirect object	3	Third person

languages (Cole et al. 1982). Although the DO that occurs with monotransitive verbs is not lexically case-marked in Tenyidie, it can still head an IRC. We shall also demonstrate that in instances involving potential ambiguity of the DO *vis-à-vis* other constituents (such as IO, locative PP, ablative PP), it is the DO which has hierarchical precedence over the other constituents in heading an IRC, whereas the comitative and instrumental PPs which occur as the second constituent in the embedded S have precedence in interpretation over the DO, indicating that linear precedence in constituent word order plays an important role in the interpretation of a constituent as head of an IRC. We shall also show that there is a single instance where neither the hierarchical precedence nor the linear order of constituents plays any role at all in the interpretation of an IRC. We shall demonstrate that IRCs are unmarked in Tenyidie, since the comitative permits only the IRC and no corresponding external relative clause is permissible. In the final section we hint at a way an internally headed NP is case-checked under the case and agreement theory of Chomsky 1995.

2.0. TYPOLOGICAL CHARACTERISTICS

Tenyidie is more generally known as Angami. It is a verb-final language and it is left-branching in the unmarked word order. It has postpositions, and a postsentential complementizer occurs to the right of the embedded sentence. The auxiliary verb follows the main verb. As in other verb-final languages, such as Japanese, Korean, Telugu, Malayalam, etc., the genitive precedes the governing noun and the marker of comparison follows the standard of comparison. Time adverbs precede place adverbs (Subbarao 1984). Just as in many other verb-final languages, it has postverbal negatives. A relative-correlative construction also occurs.

However, Tenyidie exhibits certain non-verb-final language characteristics as well. The direct object precedes the indirect object in the unmarked word order, when the lexical dative case marker **ki** is not overtly present with the indirect object of ditransitive verbs such as **tsɨ** 'give', **petha** 'teach', **tɨchɨ** 'talk to', and **pesi** 'inform'. With ditransitive verbs such as **ketse** 'send', **pu** 'tell, mention, report', **ketsɔ** 'ask', and **fon chɨ** 'telephone', where the lexical dative case marker **ki** occurs with the indirect object, Tenyidie conforms to the expected order in verb-final languages, namely, IO preceding DO. Based on evidence from internal relative clauses, we argue that the IO-DO order is the unmarked order in Tenyidie as in other verb-final languages. Adjectives, demonstrative adjectives and numerals follow the noun. Although word order is relatively free, there are certain instances where scrambling is prohibited (cf. Subbarao and Kevichüsa, in prep.).

3.0. RELATIVIZABLE POSITIONS OF INTERNAL AND EXTERNAL RELATIVE CLAUSES IN TENYIDIE

According to Keenan 1985, IRCs are found only in those languages whose basic word order is SOV. Tenyidie, too, has IRCs that contrast with external relative clauses in their syntactic behavior.

Cole et al. 1982 refer to internal relatives as "headless relatives" because the head (the NP that is being relativized) does not occur in the matrix clause, but only in the embedded sentence. They provide two pieces of evidence to show that relative clauses in the Quechua group of languages are headless. These arguments are based on **word order** and **case marking**. Imbabura Quechua is a verb-final language. The relativized noun phrase appears *in situ* "in the normal position for a direct object within a relative clause, that is to say between the subject and verb" (Cole et al. 1982:118). For example:

(1)   [runa   **alcu-ta**   jatu   shea]   ali

         man   dog-ACC   sell-PAST   NOMZ   good dog

         alcu-mi

         VALIDATOR

         'The dog that the man sold is a good dog.'

The head NP occurs in the embedded clause, and the matrix sentence does not have a corresponding occurrence of the identical NP.

3.1. Case roles of the heads of internal relative clauses

In Tenyidie, too, the NP that is being relativized occurs in the embedded sentence and not in the matrix sentence. The embedded verb occurs in the infinitival form with the infinitival (nominalizing) marker **ke** following the verb. Both the deictic marker **cɨ** and the definite marker (which agrees in number and gender with the NP occurring internally) occur to the right of the infinitival marker **ke**. First we provide examples of IRCs with direct object, instrumental, locative, goal, ablative and comitative PPs as heads. As the relativization with an indirect object differs from that of the other positions, we will then provide an analysis of the internal and external relative clauses with an indirect object as head.

Direct Object as Head

(2) nɔ   lešɨdaᵢ   phrɨ-ke-cɨ-0ᵢ-u   vi

     2sg   book   read-NOMZ-DM-0-DEF   good

     'The book that you read is good.'

Instrumental PP as Head

(3) nɔ   kutariᵢ   pie   nhasi   le

     2sg   knife   INST   fruit   cut

     ke-cɨ-0ᵢ-u   puoɨ   vi   se

     NOMZ-DM-0-DEF   sharpness   good   very

     'The knife with which you cut the fruit is very sharp.'

Locative PP as Head

(4) nɔ   miɨᵢ   gi   lešɨda   khapieba

     2sg   table   on   book   keep

     ke-cɨ-0ᵢ-u   si   pie   chɨ

     NOMZ-DM-0-DEF   wood   INST   do

     'The table on which you kept the book is made of wood.'

Goal as Head

(5) nɔ   lieᵢ   nu   tsu-ya-ke-cɨ-0ᵢ-u

     2sg   field   to   go-PRES HAB-NOMZ-DM-0-DEF

     peetse   se

     far   very

     'The field you go to is very far.'

Ablative PP as Head

(6) nɔ   dzɨkhuᵢ   nunu   dzɨ-ɨ   sevɔr

     2sg   well   from   water-fetch   brought

     ke-cɨ-0ᵢ-u   su   se

     NOMZ-DM-0-DEF   very   deep

     'The well from which you brought the water is very deep.'

Comitative PP as Head

(7) nɔ   **miepuo**ᵢ   **ze**   vɔr   ke-c‡-**0**ᵢ-u
     2sg   person   with   came   NOMZ-DM-0-DEF

     puo   cha   cha   se
     height   3sg   long   very
     'The person you came with is very tall.'

In sentences (2)-(7) the head NP in bold occurs in the embedded relative clause. The **0** in bold indicates the position of the identical NP in the matrix clause.

There are corresponding external relative clauses in which the head occurs in the matrix clause for all the positions, namely, direct object (8), instrumental (9), locative (10), goal (11), and ablative (12):

Direct Object as Head

(8) nɔ   **0**ᵢ   phr‡-ke-c‡   **lešᵢda**ᵢ-u   vi   se
     2sg   read-NOMZ-DM   book-DEF   good   very
     'The book that you read is very good.'

Instrumental as Head

(9) nɔ   **0**ᵢ   nhasi   le-ke-c‡   **kutari**ᵢ-u
     2sg   fruit   cut-NOMZ-DM   knife-DEF

     puo‡   vi   se
     sharpness   good   very
     'The knife with which you cut the fruit is very sharp.'

Locative as Head

(10) nɔ   **0**ᵢ   lešᵢda   khapieba-ke-c‡   **miz‡**ᵢ-u
      2sg   book   kept-NOMZ-DM   table-DEF

      si   pie   ch‡
      wood   INST   do
      'The table on which you kept the book is made of wood.'

Goal as Head

(11) nɔ   **0i**   tsu-ya-ke-cɨ

     2sg   go-PRES HAB-NOMZ-DM

     lie$_i$-u   petse   se

     field-DEF   far   very

     'The field you go to is very far.'

Ablative as Head

(12) nɔ   **0$_i$**   deɨ-ɨ-sevor-ke-cɨ   **dzɨkhu$_i$-u**

     2sg   water-fetch-brought-NOMZ-DM   well-DEF

     su   se

     deep   very

     'The well from which you fetched water is very deep.'

The comitative as the head does not permit an external relative clause, as example (13) illustrates:

Comitative as Head

(13) nɔ   vɔr-ke-cɨ   **miepuo-u**   puo

     2sg   came-NOM-DM   person-DEF   3sg

     cha   cha   se

     height   long   very

     'The person you came with is very tall.'

The fact that an IRC is permitted in all positions discussed above—namely, direct object, instrumental, locative, goal, ablative, and comitative—whereas an external relative clause is permitted in all the positions *except* for the comitative, indicates that IRCs are more natural than external relative clauses and are thus unmarked in Tenyidie.

3.2. IO-DO order in a simple sentence

Before we discuss the nature of internal and external relative clauses with the indirect object as head, we should add a brief note on the order of the indirect and direct objects in a simple sentence, and their lexical case markings.

Although the unmarked order of the indirect object and the direct object in verb-final languages such as Japanese, Korean, and the Dravidian and Indo-Aryan languages is IO-DO (Greenberg 1966), Tenyidie permits both orders (IO-DO and DO-IO). Therefore it is difficult to ascertain which order is unmarked. As we shall see, it is relativization which provides conclusive evidence in support of the IO-DO order as the unmarked order, as in other verb-final languages.

There are four distinct patterns that emerge with regard to the IO-DO order in Tenyidie simple sentences.

Pattern 1a

An IO which is marked with the dative case marker **ki** 'to' or **la** 'for' precedes the DO. The DO in such cases is not lexically case-marked. Thus, the order obtaining in Tenyidie is:

IO-**ki**-DO	'IO-to-DO'
IO-**la**-DO	'IO-for-DO'

(14a)	puo-e	**a-ki**	le š ɨ	puo	ketse	š ɨ
	3sg-NOM	me-to	letter	one	sent	OB
	'(S)he sent a letter to me.'					

(14b)	puo-e	**a-la**	dz ɨ-hie	puo	sevɔr	š ɨ
	3sg-NOM	me-for	water-mug	one	brought	OB
	'(S)he brought a glass of water for me.'					

Pattern 1b

The IO and DO can be scrambled, giving the following order:

DO-IO-**ki**	'IO-to-DO'
DO-IO-**la**	'IO-for-DO'

(15a)	puo-e	**le š ɨ**	puo	**a-ki**	ketse	š ɨ
	3sg-NOM	letter	one	me-to	sent	OB
	'(S)he sent a letter to me.'					

(15b)	puo-e	**dz ɨ-hie**	puo	**a-la**	sevɔr	š ɨ
	3sg-NOM	water-mug	one	me-for	brought	OB
	'(S)he brought a glass of water for me.'					

Pattern II

Both IO and DO are lexically case-marked and the DO precedes the IO, as in (16):

DO-**pie**-IO-**ki**   DO-ACC-IO-DAT

(16) puo-e   **le-šɨ**   **puo**   **pie**   **a-ki**   ketse   šɨ
     3sg-NOM   letter   one   ACC   I-DAT   send   OB
     '(S)he sent a letter to me.'

When IO and DO are both lexically case-marked, scrambling is not permitted, so that IO cannot precede DO. Thus, the following order is not permissible:

*IO-**ki**-DO-**pie**   *IO-DAT-DO-ACC

For example:

(17) *puo-e   **a-ki**   **lešɨ**   **puo**   **pie**   ketse   šɨ
     3sg-NOM   me-to   letter   one   ACC   sent   OB

Pattern IV

With verbs such as **tsɨ** 'give', **petha** 'teach', and **pesi** 'inform', the DO invariably precedes the IO; the DO is lexically case-marked with **pie** but the IO cannot be case-marked. Thus, the following order obtains:

DO-**pie**-IO

The scrambling of DO-IO in such cases is not permitted:

*IO-DO-**pie**

For example:

(20) mhasi-e   **lešɨda**   puo   **pie**   **abunɔ**   tsɨ   šɨ
     Mhasi-NOM   book   one   ACC   Abuno   gave   OB
     'Mhasi gave a book to Abuno.'

(21) puo-e   **tenidie**   **pie**   **a**   petha   šɨ
     3sg-NOM   Tenyidie   ACC   me   teach   OB
     '(S)he taught me Tenyidie.'

(22) puo-e   **mhapuo**   **pie**   **hiekɔ**   pesi   šɨ

3sg-NOM   something   ACC   us   informed   OB

'(S)he informed us about something.'

4.0.   INDIRECT OBJECT RELATIVIZED

We shall now examine whether Patterns I, II, III, and IV permit external as well as IRCs with IO as head.

Pattern Ia

IO-**ki**-DO   'IO-to-DO'

IO-**la**-do   'IO-for-DO'

An IRC is permitted with IO as head.

IRC with IO as Head

(23) nɔ   **miepuo**   **ki**   **lešɨ**   thu   šɨ

2sg   person   to   letter   wrote   OB

ke-cɨ-u-e   puo   cha   cha   se

NOMZ-DM-DEF-MON   3sg   height   long   very

'The person you wrote a letter to is very tall.'

(24) nɔ   **miepuo**   **la**   **dzɨ**   sevɔr   šɨ

2sg   person   for   water   brought   OB

ke-cɨ-u-e   puo   cha   cha   se

NOMZ-DM-DEF-NOM   3sg   height   long   very

'The person you brought the water for is very tall.'

An external relative clause is not permitted with IO as head.

External Relative Clause with IO as Head

(25) *nɔ   lešɨ   thu   šɨ   ke-cɨ

2sg   letter   wrote   OB   NOMZ-DM

miepuo-u-e   puo   cha   cha   se

person-DEF-NOM   3sg   height   long   very

(26) *nɔ   dzɨ   sevɔr   šɨ   ke-cɨ

     2sg   water   brought   OB   NOMZ-DM

     miepuo-u-e   puo   cha   cha   se

     person-DEF-NOM   3sg   height   long   very

Thus, we observe that when the IO is lexically case-marked and precedes the DO, only the IRC is permitted and not the external relative clause.

Pattern 1b

When IO and DO are scrambled as in Pattern 1b, an IRC is not permitted with the IO as head:

DO-IO-ki	'DO-IO-to'	
DO-IO-la	'DO-IO-for'	

(27a) *nɔ   lešɨ   **miepuo**   **ki**   ketse   šɨ

      2sg   letter   person   to   sent   OB

      ke-cɨ-u   puo   cha   cha   se

      NOM-DM-DEF   3sg   height   long   very

(27b) *nɔ   lešɨ   **miepuo**   **la**   ketse   šɨ

      2sg   letter   person   for   sent   OB

      ke-cɨ-u   puo   cha   cha   se

      NOM-DM-DEF   3sg   height   long   very

Since even an IRC with the IO as head is not permissible when there is scrambling of IO-DO, the order of occurrence of IO-DO is crucial for relativisation; the IO cannot be relativized when the DO precedes it.[2]

External Relative Clause with IO as Head

Since in an external relative clause the head NP occurs to the right of the embedded sentence, while the DO stays *in situ*, an IO cannot head an external relative clause, as the ungrammaticality of example (28) illustrates:

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[2]We shall show below that an internal relative clause with the IO as head is also not possible in patterns III and IV, where DO precedes IO.

(28a) *nɔ   leš┼   thu   š┼   ke-c┼
        2sg   letter   wrote   OB   NOMZ-DM

miepuo-u-e   puo   cha   cha   se
person-DEF-NOM   3sg   height   long   very

(28b) *nɔ   leš┼   thu   š┼   ke-c┼
        2sg   letter   wrote   OB   NOMZ-DM

miepuo-u-e   puo   cha   cha   se
person-DEF-NOM   3sg   height   long   very

Pattern II

In the pattern

DO-**pie**-IO-ki,

neither an IRC nor an external relative clause with IO as head is permitted, as the ungrammaticality of sentences (29) and (30) illustrates:

IRC with IO as Head

(29) *puo-e   leš┼   puo   pie   **miepuo**   **ki**
       3sg-NOM   letter   one   ACC   person   to

       ketse   š┼   ke-c┼-u   mhani   se
       sent   OB   NOMZ-DM-DEF   rich   very

An external relative clause is also not permitted when scrambling of IO and DO takes place.

External Relative Clause with IO as Head

(30) *puo-e   leš┼   puo   pie   ketse   š┼
       3sg-NOM   letter   one   ACC   sent   OB

       ke-c┼   **miepuo**-u   mhani   se
       MONZ-DM   person-DEF   rich   very

Just as in Pattern Ib, the non-permissibility of either an internal or an external relative clause is due to the order in which IO-DO occur. In this

pattern, too, since IO follows the DO, neither an internal nor an external relative clause is permissible, even if the IO is lexically case-marked with **ki**.[3]

Pattern III

In this pattern,

DO + participial form of the ditransitive verb + **pie** (ACC) + IO + light verb + AUX,

it is the DO that carries the accusative case marker **pie**, and the IO is not lexically case-marked. The participial form of the embedded verb occurs with the DO and a light verb that carries the AUX occurs with the IO.

In this pattern, too, neither the IRC nor the external relative clause with IO as head is permissible:

IRC with IO as Head

(31)	*nɔ-e	lešɨ	thu	pie	**miepuo**	tsɨ
	2sg-NOM	letter	wrote	ACC	person	give

	šɨ	ke-cɨ		mhani	se
	OB	NOMZ-DEM-DEF		rich	very

External Relative Clause with IO as Head

(32)	[8]nɔ-e	lešɨ	thu	pie	tsɨ	šɨ
	2sg-NOM	letter	wrote	ACC	give	OB

	ke-cɨ	**miepuo-u**	mhani	se
	NOMZ-DM	person-DEF	rich	very

Just as in Patterns Ib and II, here the IO follows the DO, causing the non-permissibility of either an internal or an external relative clause. We observe once again that the order in which IO and DO occur is crucial for relativization in Tenyidie.

Pattern IV

DO-**pie** (ACC)-IO

In this pattern the DO is marked by the ACC case marker **pie**, and the IO follows the DO. The IO in such cases also does not carry any lexical case

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[3]We shall demonstrate later that this non-permissibility is due to the relative hierarchical precedence of the DO over the IO.

marker. As one would predict, the IO cannot head either an internal or an external relative clause because it is the DO that precedes the IO. We have already observed in Patterns Ib, II, and III that in cases where DO precedes IO, the IO cannot head either sort of relative clause.

IRC witih IO as Head

(33)   *nɔ-e   lešɨ   puo   pie   **miepuo**   tsɨ

           2sg-NOM   letter   one   ACC   person   gave

           šɨ   ke-cɨ-u   ziešuo   se

           OB   NOMZ-DM-DEF   ugly   very

(34)   *nɔ-e   lešɨ   puo   pie   tsɨ   šɨ

           2sg-NOM   letter   one   ACC   gave   OB

           ke-cɨ   **miepuo**-u   ziešuo   se

           NOMZ-DM   person   ugly   very

The nonoccurrence of either type of relative clause with IO as the head when the DO precedes the IO convincingly shows that (i) word order plays a crucial role in relativization and (ii) the unmarked order of DO-IO in Tenyidie is IO preceding DO. Let us consider the significance of word order first. For an IO to qualify as head of an IRC it should occur in the second position of the embedded relative clause. Since subject is the NP of S and DO cannot precede an IO if an IO is the head of an IRC, we see that the second position can be occupied only by an IO if it heads an IRC.

The above discussion concerning relative clauses with IO as head can be summarized as follows:

PATTERNS		INTERNAL	EXTERNAL
Ia	IO-**ki**-DO	Y	N
Ib	DO-IO-**ki**	N	N
II	DO-**pie**-IO-**ki**	N	N
III	DO-participial form of ditransitive verb-IO-light verb	N	N
IV	DO-**pie**-IO	N	N

Furthermore, the facts that only IRCs are permissible with a comitative NP as head (sentence 7), or with an IO as head (sentences 23 and 24; repeated as 35-37 below for convenience), and that the corresponding external relative clauses are not permissible, as in sentences 13, 25, and 26 (repeated as 38-40 below for convenience), clearly show that IRCs are unmarked and that external relative clauses are marked in Tenyidie.

IRC
•*COM PP as Head*

(35)	nɔ	miepuo$_i$	ze	vɔr	ke-cɨ-0$_i$-u
	2sg	person	with	came	NOMZ-DM-0-DEF

	puo	cha	cha	se
	height	3sg	long	very

'The person you came with is very tall.'

•*IO as Head*

(36)	nɔ	miepuo	ki	lešɨ	thu	šɨ
	2sg	person	to	letter	wrote	OB

	ke-cɨ-u-e			puo	cha	cha	se
	NOMZ-DM-DEF-MON			3sg	height	long	very

'The person you wrote a letter to is very tall.'

(37)	nɔ	miepuo	la	dzɨ	sevɔr	šɨ
	2sg	person	for	water	brought	OB

	ke-cɨ-u-e			puo	cha	cha	se
	NOMZ-DM-DEF-NOM			3sg	height	long	very

'The person you brought the water for is very tall.'

External Relative Clause
•*COM PP as Head*

(38)	nɔ	vɔr-ke-cɨ	miepuo-u	puo
	2sg	came-NOM-DM	person-DEF	3sg

	cha	cha	se
	height	long	very

'The person you came with is very tall.'

•*IO as Head*

(39) *nɔ   lešɨ   thu   šɨ   ke-cɨ

     2sg   letter   wrote   OB   NOMZ-DM

     miepuo-u-e   puo   cha   cha   se

     person-DEF-NOM   3sg   height   long   very

(40) *nɔ   dzɨ   sevɔr   šɨ   ke-cɨ

     2sg   water   brought   OB   NOMZ-DM

     miepuo-u-e   puo   cha   cha   se

     person-DEF-NOM   3sg   height   long   very

In the following section we shall show that the linear position of occurrence of a constituent as head (DO, IO, comitative, instrumental, ablative, locative, or goal) in an IRC plays a crucial role in its interpretation.

5.0. POSITION OF THE HEAD IN AN INTERNAL RELATIVE CLAUSE

In an IRC a subject that occurs in the initial position of an embedded sentence cannot be the head. It is always a constituent other than the subject in the embedded sentence that may head an IRC. Thus, in sentence (2) it is the DO, the head of the internal relative clause, that immediately follows the embedded subject. In sentence (3) it is the instrumental PP which is the head of the internal relative clause that immediately follows the embedded subject. In sentences (4), (5), (6), and (7) it is the locative, goal, ablative, and comitative PPs respectively that are the heads of the IRC, and all these immediately follow the embedded subject. Thus, we can tentatively claim that it is the second constituent in the embedded sentence that heads an IRC.

Thus, if it is the DO that is the head of an IRC, the DO occurs as the second constituent in the embedded sentence immediately to the right of the embedded subject, as in example (41):

(41) nɔ   **ga**   kutari   pie   le   ke-cɨ-u

     2sg   vegetable   knife   INST   cut   NOMZ-DM-DEF

     vi   se

     good   very

     'The vegetable you cut with the knife is very good.'

     *'The knife with which you cut the fruit is very good.'

If it is the instrumental PP that is the head, then the instrumental PP occurs as the second constituent in the embedded sentence, as in (42):

(42) nɔ **kutari** pie ga le ke-cɨ-u
2sg knife ACC vegetable cut NOMZ-DM-DEF

vi se
good very

'The knife you cut the vegetable with is very sharp.'

*'The vegetable which you cut with the knife is very good.'

Thus it appears that precedence in linear order of a constituent plays a crucial role for an NP/PP to qualify as the head of an IRC. However, we shall demonstrate below that the relative hierarchy of an NP takes precedence over linear hierarchy. We shall show that DO has precedence in the interpretation of a specific constituent as the head of an IRC.

6.0. PRECEDENCE OF THE DO OVER THE OTHER CONSTITUENTS

In cases involving potential ambiguity between a DO and a non-DO as the head of an IRC, it is the DO which takes precedence over the IO, locative or ablative PPs irrespective of its linear position in the embedded clause (cf. §§ 6.1 and 6.2.1 below). However, the DO does not have hierarchical precedence over the comitative and instrumental PPs as heads (cf. § 6.2.2 below). We shall first consider the DO and IO as potential candidates to head an IRC.

6.1. *DO and IO as Potential Candidates to Head an Internal Relative Clause*

In example (43) both IO and DO qualify to head the IRC, since the VP of the matrix sentence can assign the theta role of goal to **miepuo** 'person' or theme to **lešɨ** 'letter':

(43) nɔ miepuo ki **lešɨ**ᵢ thu šɨ ke-cɨ-0ᵢ-u
2sg person to letter wrote OB NOMZ-DM-0-DEF

ziešuo se
ugly very

'The letter you wrote to the person is very ugly (distasteful).'

*'The person you wrote a letter to is very ugly.'

Theta role assignment to the subject compositionally by the VP of the matrix sentence requires the following mechanism. The subject of the matrix S is an empty operator and it can theoretically be coindexed with any argument of the embedded clause, since any argument can be a potential head of the IRC. The linking of the empty operator with an argument of the embedded sentence can be done by chain formation. Thus, the VP of the matrix S can theoretically assign a theta role to any argument of the embedded sentence. Though both IO and DO can head the IRC in (43), it is the DO which takes precedence over the IO. It is also significant that the position of occurrence of the DO as the third constituent in the embedded sentence is not crucial. That is, linear order is not relevant; it is the structural dependence in terms of the relative hierarchy of the DO versus non-DOs that is crucial in the interpretation of the head of a Tenyidie IRC.

6.2.1. DO and OO (LOC or ABL) as Potential Candidates to Head an IRC

In sentences where either a DO or an OO (locative, ablative) can be potential candidates to head an IRC, it is the DO which takes precedence over the OO, irrespective of its linear position of occurrence, as illustrated below.

LOCATIVE PP

In sentence (44), although the locative PP occurs in the second position immediately to the right of the subject of the embedded sentence, it is the DO, and not the locative PP, that ~~which~~ is interpreted as the head.

(44)	nɔ	mizɨ	gi	**lešɨda**$_i$	khapieba	ke-cɨ-0$_i$-u
	2sg	table	on	book	kept	NOMZ-DM-0-DEF

ʒa	se
big	very

ABLATIVE PP

In example (45), although the ablative PP occurs as the second constituent immediately to the right of the subject of the embedded sentence, it is the DO, and not the ablative PP, that is interpreted as the head of the IRC.

(45) nɔ   dzɨkhu   nunu   **dzɨ$_i$-I**   sevɔr
     2sg   well   from   water-fetch   brought

ke-cɨ-**0$_i$**-u   rhu   se
NOMZ-DM-0-DEF   dirty   very

'The water which you brought from the well is very dirty.'

*'The well from which you brought water is very dirty.'

6.2.2 DO and OO (COM or INST) as Potential Candidates to Head an IRC

The DO does not have relative hierarchical precedence over comitative or instrumental PPs. When a comitative or instrumental PP occurs as the second constituent in an IRC and the DO occurs as the third constituent, it is only the comitative or instrumental PP that is interpreted as the head, and the DO does not have any hierarchical precedence over the PP.

COMITATIVE PP

In example (46), although the DO **lešɨda** 'book' as well as the comitative PP **midpuo ze** 'person with' are potential candidates to head an IRC, it is only the comitative PP **miepuo ze** 'person with' that is so interpreted.

(46) nɔ   **miepuo**   **ze$_i$**   lešɨda   phrɨ-ba-ke-cɨ-**0$_i$**-u
     2sg   person   with   book   read-PROG-NOMZ-DM-0-DEF

ȝa   se
big   very

'The person you are reading a book with is very big.'

*'The book that you are reading with the person is very big.'

INSTRUMENTAL PP

In example (47), although the DO **nhasi** 'fruit' and the instrumental PP **kutari pie** 'knife with' are potential candidates to head an IRC, it is only the instrumental PP that qualifies as head.

(47) nɔ   **kutari**   **pie$_i$**   nhasi   le   ke-cɨ-**0$_i$**-u
     2sg   knife   INST   fruit   cut   NOMZ-DM-0-DEF

3a   se

big   very

'The knife with which you cut the fruit is very big.'

*'The fruit which you cut with the knife is very big.'

We shall now examine the interpretation of a constituent when there are three potential candidates for head of the IRC.

6.3.1. DO, IO, and OO (ABL or LOC) as Potential Candidates to Head an IRC

In a sentence in which a DO, an IO, and an OO (ablative or locative) are all potential candidates to head an internal relative clause, it is the DO which takes hierarchical precedence over the IO and the OO, even though the OO occurs as the second constituent in the embedded sentence.

In sentences (48a) and (48b), although either the DO, the ablative PP, or the locative PP, could theoretically head the IRC, it is only the DO **dzɨ** 'water' that can actually do so, and not the *for*-dative NP **miepuo** 'person' or the ablative PP **dzɨkhu nunu** 'from the well'. It is crucial to note that the DO occurs not as the second constituent immediately to the right of the embedded subject, but as the fourth constituent in the embedded sentence.

Sentences such as (48a-b) once again clearly demonstrate that hierarchical precedence is stronger than linear precedence:

ABLATIVE PP

(48a)	nɔ	dzɨkhu	nunu	miepuo	la	dzɨ$_i$-ɨ
	2sg	well	from	person	for	water-fetched

	sevɔr	šɨ	ke-cɨ-ɔ$_i$-u	rhu	se
	brought	OB	NOMZ-DM--DEF	dirty	very

'The water that you fetched from the well for the person is very dirty.'

*'The well from which you brought the water for the person is very dirty.'

*'The person for whom you brought the water from the well is very dirty.'

LOCATIVE PP

(48b)	nɔ	n-zɨbu	nu	ba	di	miepuo	ki
	2sg	your-room	in	sit	CP	person	to

lešɨ$_i$	thu	šɨ	ke-cɨ-0$_i$-u	ziešuo	se
letter	write	OB	NOMZ-DM--DEF	ugly	very

'The letter which you wrote sitting in your room to the person is very ugly.'

6.3.2. DO, IO, and OO (INST) as Potential Candidates to Head an IRC

In a sentence in which a DO, an IO, and an OO (instrumental) are all potential candidates to head an IRC, it is the OO (instrumental) that is interpreted as the head:

(49)	nɔ	miepuo	ɨa	**kutari**	**pie**$_i$	nhasi	le
	2sg	person	for	knife	with	fruit	cut

ke-cɨ-0$_i$-u	vi	se
NOMZ-DM-0-DEF	good	very

'The knife with which you cut the fruit for the person is very good.'
    = INST PP as head
*'The person for whom you cut the fruit with a knife is very good.'
    = *for-Dat as head
*'The fruit which you cut with the knife for the person is very good.'
    = *DO as head

Though the IO **miepuo** 'person' in example (49) occurs in the second position, it does not get interpreted as the head of the IRC. Sentences such as this show that an instrumental PP has precedence over an IO. The IO which has the thematic role of the benefactive is higher in thematic hierarchy than the instrumental OO. The IO in sentence (49) fulfills two requirements:

  (i)   it is thematically higher than the OO, and
  (ii) it occurs in the second position of the embedded sentence in an IRC.

However, in spite of fulfilling these two requirements, the IO does not qualify to be the head of an IRC.

Let us now consider the status of the DO *vis-à-vis* the OO (INST). Although the DO (patient) is higher in thematic hierarchy than the instrumental OO, the DO also does not qualify to head the IRC by virtue of its occurrence in

the fourth position in the embedded relative clause. However, if the DO occurs in the second position, it alone qualifies to be the head.

A comparison of sentences (44) and (45) with (49) indicates that it is the nature of the PP (locative and ablative *versus* instrumental) that is crucial. Neither the position of occurrence of an IO or an OO (locative or ablative) nor the hierarchical precedence of the IO has any role to play at all. Thus, sentences such as (49) show that hierarchical precedence and linear precedence are both violated. As a result, neither the locative PP in sentence (44) nor the ablative PP in sentences (45) and (48a) qualifies to head an IRC, even though they occur in the second position in the embedded sentence.

The above discussion can be summarized as follows ("A" numbers refer to examples in the appendix):

Constituent in 2nd Position	*Constituent in 3rd/4th Position*	*Head of an IRC*	*Examples*
DO	IO	DO	15, 16, 18-21
IO	DO	DO	43
DO	OO (ABL/LOC)	DO	A1a, A1b
OO (ABL/LOC)	DO	DO	44, 45
DO	OO (INST/COM)	DO	A2a, A2b
OO (INST/COM)	DO	OO (INST/COM)	46, 47
OO (ABL/LOC)	IO-DO	DO	48a, 48b
OO (ABL/LOC)	DO-IO	DO	A3a, A3b
IO	OO (ABL/LOC)-DO	DO	A4a, A4b
IO	DO-OO (ABL/LOC)	DO	A5a, A5b
DO	OO (ABL/LOC)-IO	DO	A6a, A6b
DO	IO-OO (ÁBL/LOC)	DO	A7a, A7b
IO	OO (INST)-DO	OO (INST)	49
IO	DO-OO (ISNT)	DO	A8
OO (INST)	IO-DO	OO (INST)	A9
DO	IO-OO (INST)	DO	A11
DO	OO (INST)-IO	DO	A12

7.0. HIERARCHICAL PRECEDENCE OF COM AND INST PP'S OVER DO

The question that now arises is the following: Why doesn't the DO have hierarchical precedence over the comitative PP and the instrumental PP, just as it did in the case of other PPs (locative and ablative)?

Let us first consider the comitative PP. It might be recalled that the comitative NP cannot head an external relative clause, as the ungrammaticality of sentences (50) and (51) illustrates:

(50) *nɔ   vɔr   ke-cɨ   **miepuo**-u   puo

      2sg   came   NOMZ-DM   person-DEF   3sg

      cha   cha   se

      height   long   very

      *'The person with whom you came is very tall.'

(51) *abunɔ   kegi   ke-cɨ   **miepuo**-u   azemie

      Abuno   fought   NOMZ-DM   person-DEF   my friend

      *'The person with whom Abuno fought is my friend.'

The fact that a comitative PP permits only an IRC and no other strategy for relativization such as an external relative clause or a relative-correlative construction might provide an explanation. Every language requires a mechanism to modify each position of the noun phrase accessibility hierarchy (NPAH) proposed in Keenan and Comrie 1977, no matter whether the strategy involves a full-fledged relative clause or a participial clause. Logically, to communicate different possible situations or events, it should be possible to relativize every position in the NPAH. However, since an external relative clause is not possible with a comitative PP, the only other means of relativizing a comitative PP is the IRC, and therefore an IRC with a comitative PP takes precedence in interpretation, as illustrated in example (52):

(52) nɔ   **miepuo**   **ze**   lešɨda   phrɨ-ba-ke-cɨ-u

      2sg   person   with   book   read-PROG-NOMZ-DM-DEF

      ӡa   se

      big   very

      'The person you are reading a book with is very big.'

Another question still remains to be answered. Why does an instrumental PP have precedence over the DO and IO? It might be recalled that an instrumental PP permits an IRC as well as an external relative clause, as in sentences (3) and (9), respectively. The functional explanation we provided

above for the comitative PP does not hold for the instrumental PP. We do not at present have any explanation for the precedence of the instrumental PP over the DO. We leave this issue open for further research.

The following table provides a summary of the positions and permissibility of internally and externally headed relative clauses.

POSITION	*INTERNAL RC*	*EXTERNAL RC*
CO	Y	Y
IO (with lexical case marker)	Y	Y
IO (no lexical case marker)	N	N
LOC	Y	Y
ABL	Y	Y
INST	Y	Y
COM	Y	N

8.0. TIME EXPRESSIONS AS POTENTIAL HEADS OF AN IRC

The next issue with which we are concerned is time expressions as potential heads of IRCs. We focus our attention on the position of occurrence of the time expression.

A time adverb that is a PP cannot head an IRC, as the ungrammaticality of sentences (55) and (56) illustrates:

(53) nɔ-e   cɨ-zɨ   re-pa
     2sg-NOM   that-night   went-out
     'You went out that night.'

(54) nɔ-e   cɨ-nhie   kiya
     2sg-NOM   that-day   married
     'You got married on that day.'

(55) *nɔ   zɨ   re-pa   ke-cɨ-u   le   se
      2sg   night   went-out   NOMZ-DM-DEF   hot   very
     *'The night you went out was very hot.'

(56) *nɔ   **nhie**   kiya   ke-cɨ-u   meku   se
     2sg   day   married   NOMZ-DM-DEF   cold   very
     *'The day you got married was very cold.'

The only strategy that is available is the external relative clause:

(57) nɔ   re-pa   ke-cɨ   **z ɨ**   le   se
     2sg   went-out   NOMZ-DM   night   hot   very
     'The night you went out was very hot.'

(58) nɔ   kiya   ke-cɨ   **nhie**   meku   se
     2sg   married   NOMZ-DM   day   cold   very
     'The day you got married was very cold.'

Note that the definite marker -*u* cannot occur in sentences (57) and (58):

(59) *nɔ   re-pa   ke-cɨ   **zɨ-u**   le   se
     2sg   went-out   NOMZ-DM   night-DEF   hot   very

(60) *nɔ   kiiya   ke-cɨ   **nhie-u**   meku   se
     2sg   married   NOMZ-DM   day-DEF   cold   very

It might be worth recapitulating that the head of an IRC is the second constituent in the embedded sentence, occurring immediately to the right of the subject. Since a time expression occurs immediately to the right of the embedded subject in Tenyidie, the question that arises is this: can it be counted as a constituent at all for determining the relative position of the head of the IRC? Since the time adverb cannot head an IRC, it cannot be counted as a constituent when the position of the head of an IRC is being determined. The following examples are illustrative:

(61) nɔ   ndu   **miepuo**   ki   lešɨ   thu
     2sg   yesterday person   to   letter   wrote

     šɨ   ke-cɨ-u   mhani   se
     OB   NOMZ-DM-DEF   rich   very
     'The person to whom you wrote a letter yesterday is very rich.'

(62) nɔ   ndu   **kutari**   pie   ga   le
     2sg   yesterday knife   INST   vegetable   cut

ke-cɨ-u   puoɬ   vi
NOMZ-DM-DEF   sharpness   good

'The knife with which you cut the vegetable yesterday is sharp.'

In sentence (61) the head of the IRC is **miepuo** 'person' and not **ndu** 'yesterday'. In sentence (62) it is **kutari** 'knife' that is the head, and thus the position of the adverb does not count when the relative position of the head of an IRC is determined.

9.0. CASE MARKING IN IRCS

The second argument of Cole et al. 1982 concerns case marking. Noun phrases in Quechua are lexically case-marked. In an IRC, the NP that is relativized retains the lexical case marker in contrast to an NP in an externally headed relative clause that lacks a case marker. In sentence (1) from Quechua (repeated below as example 63), the accusative case marker **ta** is overtly present, which clearly demonstrates that the NP does not belong to the matrix clause.

(63)   [runa   **alcu-ta**   jatu   shea]   ali
         man   dog-ACC   sell-PAST   NOMZ   good dog

alcu-mi
VALIDATOR

'The dog that the man sold is a good dog.'

If the NP is case-marked in a simple sentence in Tenyidie, the marker is retained in the IRC. In sentence (52), where an NP with a comitative case marker is relativized, in sentence (61), where an IO is relativized, and in sentence (62), where an NP with an instrumental case marker is relativized, the case markers are retained.

The case of the direct object in IRCs deserves special mention. The accusative marker is zero in Tenyidie in a sentence with monotransitive verbs:

(64) abunɔ-e   lešɨda-**0**   phrɨ-ba
     Abuno-NOM   book-ACC   read-PROG

'Abuno is reading a book'

(65) mhasi-e   miepuo-**0**   ngu
     Mhasi-NOM   person-ACC   saw
     'Mhasi saw a person.'

Thus, in IRCs modifying the direct object, there is no overt lexical case marker, as in (66):

(66) abunɔ-e   lešɨda-**0**   phrɨ-ba   ke-cɨ-u
     Abuno-NOM   book-ACC   read-PROG   NOMZ-DM-DEF

     vi   se
     good   very
     'The book which Abuno is reading is very good.'

Thus, **a** DO can head an IRC whether it is lexically case-marked or not, unlike Quechua where a case marker (*ta*) must occur with the DO.

However, in a Tenyidie sentence with a ditransitive verb, a direct object that is not otherwise case-marked in a sentence with a monotransitive verb requires the case marker **pie**, as in sentences (67) and (68):

(67) abunɔ-e   lešɨda   puo   **pie**   khrisa-yo
     Abuno-NOM   book   one   ACC   young man-DIM

     tsɨ   šɨ
     gave   OB
     'Abuno gave a book to the young man.'

(68) *abunɔ-e   lešɨda   puo-**0**   khrisa-yo
     Abuno-NOM   book   one-ACC   young man-DIM

     tsɨ   šɨ
     gave   OB

In an IRC in which the direct object is relativized, the accusative case marker **pie** is retained, as in sentence (69). Sentence (70) is ungrammatical, since the DO is not case-marked.

(69) abunɔ-e   lešɨda-**pie**   khrisa-yo   tsɨ
     Abuno-NOM   book-ACC   young man-DIM   gave

     šɨ   ke-cɨ-u   ʒa   se
     OB   NOMZ-DM-DEF   big   very
     'The book which Abuno gave to the young man is very big.'

(70) *abunɔ-e   lešɨda-**0**   khrisa-yo   tsɨ
     Abuno-NOM   book-ACC   young man-DIM   gave

     šɨ   ke-cɨ-u   ʒa   se
     OB   NOMZ-DM-DEF   big   very

Sentence (66) illustrates that a non-case-marked NP can head an IRC, while sentence (68) shows that a case marker cannot be deleted in an IRC if it was originally present in a simple sentence.

In the following section we shall briefly hint at the phenomenon of case checking of an NP in the AGR-based case theory of Chomsky 1995.

10. CASE CHECKING

In the Minimalist framework, each NP has to be checked for case features by functional heads such as Agr S, Agr DO, etc. In IRCs, we have observed that each NP requires a case marker except a DO with a monotransitive verb. According to Chomsky 1995, NPs which are lexically case-marked need not be moved to the SPEC of a functional head for case checking, since they are assigned case by the adposition. The embedded verb can assign case to the DO of the internally headed relative clause after it raises to the SPEC position of Agr DO, and Agr DO subsequently assigns case to the DO in its SPEC position. The precise mechanism of case assignment in IRCs in Tenyidie remains to be clearly worked out.

APPENDIX

ABLATIVE PP

(1a)	nɔ	**dzɨ**	dzɨkhu	nunu	ɨ	sevɔr
	2sg	water	well	from	fetched	brought

	ke-cɨ-u		rhu	se		
	NOMZ-DM-DEF		dirty	very		

'The water that you fetched from the well is very dirty.'

LOCATIVE PP

(1b)	nɔ	**lešɨda**	pie	mizɨ	gi	kha-ba
	2sg	book	ACC	table	on	kept

	ke-cɨ-u		ʒa	se		
	NOMZ-DM-DEF		big	very		

'The book that you kept on the table is very big.'

INSTRUMENTAL PP

(2a)	nɔ	**nhasi**	kutari	pie	le	ke-cɨ-u
	2sg	fruit	knife	INST	cut	NOMZ-DM-DEF

	vi	se				
	good	very				

'The fruit that you cut with the knife is very good.'

COMITATIVE PP

(2b)	nɔ	**lešɨda**	miepuo	ze	phrɨ	ba
	2sg	book	person	COM	read	PROG

	ke-cɨ-u	ʒa	se			
	NOMZ-DM-DEF	big	very			

'The book you are reading with the person is very big.'

ABLATIVE PP

(3a)
nɔ	dzɨkhu	nunu	**dzɨ**	miepuo	la	ɨ
2sg	well	from	water	person	for	fetched

sevɔr	ke-cɨ-u	rhu	se
brought	NOMZ-DM-DEF	dirty	very

'The water that you fetched from the well for the person is very dirty.'

LOCATIVE PP

(3b)
nɔ	nzɨbu	nu	ba	di	**leš ɨ**	puo	thu	pie
2sg	room	in	sit	CP	letter	one	wrote	ACC

miepuo	tsɨ	šɨ	ke-cɨ-u	ziešuo	se
person	give	OB	NOMZ-DM-DEF	ugly	very

'The letter you wrote sitting in your room to the person is very ugly.'

ABLATIVE PP

(4a)
nɔ	miepuo	la	dzɨkhu	nunu	**dzɨ**	ɨ
2sg	person	for	well	from	water	fetched

sevɔr	ke-cɨ-u	rhu	se
brought	NOMZ-DM-DEF	dirty	very

'The water that you fetched from the well for the person is very dirty.'

LOCATIVE PP

(4b)
nɔ	miepuo	ki	nzɨbu	nu	ba	di	**leš ɨ**
2sg	person	to	room	in	sit	CP	letter

puo	thu	šɨ	ke-cɨ-u	ziešuo	se
one	wrote	OBJ	NOMZ-DM-DEF	ugly	very

'The letter you wrote sitting in your room to the person is very ugly.'

ABLATIVE PP

(5a) nɔ   miepuo   la   **dzɨ**   dzɨkhu   nunu   ɨ
      2sg   person   for   water   well   from   fetched

      sevɔr   ke-cɨ-u   rhu   se
      brought NOMZ-DM-DEF   dirty   very

      'The water that you fetched from the well for the person is very dirty.'

LOCATIVE PP

(5b) nɔ   miepuo   ki   **le š ɨ**   puo   nzɨbu   nu   ba
      2sg   person   to   letter   one   rom   in   sit

      di   thu   š ɨ   ke-cɨ-u   ziešuo   se
      CP   wrote   OBj   NOMZ-DM-DEF   ugoy   very

      'The letter you wrote sitting in your room to the person is very ugly.'

ABLATIVE PP

(6a) nɔ   **dz ɨ**   cz ɨkhu   nunu   miepuo   la   ɨ
      2sg   water   well   from   person   for   fetched

      sevɔr   ke-cɨ-u   rhu   se
      brought NOMZ-DM-DEF   dirty   very

      'The water that you fetched from the well for the person is very dirty.'

LOCATIVE PP

(6b) nɔ   **le š ɨ**   puo   nzɨbu   nu   ba   di   miepuo   ki
      2sg   letter   one   rom   in   sit   CP   person   to

      thu   š ɨ   ke-cɨ-u   ziešuo   se
      wrote   OBJ   NOMZ-DM-DEF   ugly   very

      'The letter you wrote sitting in your room to the person is very ugly.'

ABLATIVE PP

(7a)

no	**dzɨ**	miepuo	la	dzɨkhu	nunu	ɨ
2sg	water	person	for	well	from	fetched

sevɔr	ke-cɨ-u	rhu	se
brought	NOMZ-DM-DEF	dirty	very

'The water that you fetched from the well for the person is very dirty.'

LOCATIVE PP

(7b)

no	**lešɨ**	puo	miepuo	ki	nzɨbu	nu	ba
2sg	letter	one	person	to	rom	in	sit

di	thu	šɨ	ke-cɨ-u	ziešuo	se
CP	wrote	OBJ	NOMZ-DM-DEF	ugly	very

'The letter you wrote sitting in your room to the person is very ugly.'

INSTRUMENTAL PP

(8)

no	miepuo	la	**nhasi**	kutari	pie	le
2sg	person	for	fruit	knife	INST	cut

ke-cɨ-u	vi	se
NOMZ-DM-DEF	good	very

'The fruit which you cut with the knife for the person is very good.'

(9)

no	**kutari**	**pie**	miepuo	la	nhasi	le
2sg	knife	INST	person	for	fruit	cut

ke-cɨ-u	vi	se
NOMZ-DM-DEF	good	very

'The knife with which you cut the fruit for the person is very good.'

(10) | nɔ | **kutari** | **pie** | nhasi | miepuo | la | le |
|---|---|---|---|---|---|---|
| 2sg | knife | INST | fruit | person | for | cut |

ke-cɨ-u		vi	se
NOMZ-DM-DEF		good	very

'The knife with which you cut the fruit for the person is very good.'

(11) | nɔ | **nhasi** | miepuo | la | kutari | pie | le |
|---|---|---|---|---|---|---|
| 2sg | fruit | person | for | knife | INST | cut |

ke-cɨ-u		vi	se
NOMZ-DM-DEF		good	very

'The fruit which you cut with the knife for the person is very good.'

(12) | nɔ | **nhasi** | kutari | pie | miepuo | la | le |
|---|---|---|---|---|---|---|
| 2sg | fruit | knife | INST | person | for | cut |

ke-cɨ-u		vi	se
NOMZ-DM-DEF		good	very

'The fruit which you cut with the knife for the person is very good.'

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