The relative clause in Taglennaa (Kordofan Nubian)

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1. Introduction

Taglennaa (also known by its xenonym Kururu) is part of the Kordofan Nubian language continuum. Jakobi (in prep.) divides this continuum into two groups characterized by the length of the vowel of monosyllabic nouns. In Ilaku (Abu Jinuk), Kasha, Kaakmbee (Karko), Kunaku (Kujuria), Fanda, Wali, Kwashi (Kudur) and Warkimbee (Dilling), the vowel of a monosyllabic noun is long, in Uncunwee (Ghulfan), Dabri, Kaaral (Dabatna), Kadinnaa (Kadaru), Taglennaa (Kururu), and Dair this vowel is short.

The Kordofan Nubian languages in the Nuba Mountains, the Nile Nubian languages, and the Nubian languages of Darfur form the Nubian language family. According to Rilly's genetic classification (2010), Nubian, Nyima (Nuba Mountains, Sudan), Tama (Wadai, Chad), Nara (Eritrea) and the extinct Meroitic language of northeastern Sudan represent the northern branch of Eastern Sudanic, which is a primary branch of Nilo-Saharan.

The language name Taglennaa is composed of five morphemes, *Tagle=na ini=na aa*, which may be glossed as 'Tagle=GEN people=GEN language'[1], i.e., 'Tagle's people's language'. It is spoken in Tagle (Kororo on the map on p. 380), a village situated in the Kadero Hills, locally known as the Six Mountains (Ar. *al-ǧibāl al-sittah*), in the eastern Nuba Mountains of South Kordofan, Sudan.

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[1] Abbreviations: 1, 2, 3 – 1st, 2nd, 3rd person; ACC – accusative; AN – agent noun suffix; APPL – applicative; ASP – aspect; CAUS – causative; COP – copula; DIM – diminutive; EXCL – exclusive; FRQ – frequentative; FUT – future; GEN – genitive; IMP – imperative; INCL – inclusive; INS – instrumental; LOC – locative; NEG – negation; PERF – perfect; PL – plural; PLR – plural S/P; PRO – subject pronoun; PRS – present; PRTC – participle; PST – past; Q – question marker; REL – relative marker; SG – singular; SM – subject marker; SNG – singular S/P; SSC – same subject converb.

Taglennaa is characterized by the following typological features. Its basic constituent order is Subject–Verb in intransitive clauses and Subject–Object–Verb in transitive clauses. The subject constituent is unmarked regardless of transitivity, the semantic-syntactic roles of other constituents are indicated by clitic case markers: =*gi* marks the object (glossed ACC), =*na* the Genitive (GEN), =*r* the Locative (LOC), and =*kɔ* the Instrument (INS) (for other functions of *kɔ* see section 5). Moreover, the subject is cross-referenced by person suffixes on the verb where they often fuse with the TAM morphemes.

The number (singular/plural) of arguments is often referenced by morphemes extending the verb root or by selecting suppletive roots (glossed SNG and PLR). With intransitive verbs, SNG/PLR refers to the number of the syntactic subject, with transitive verbs reference is to the object.

Using the labels S (subject of intransitive verb), A (subject of transitive verb) and P (object) one might say that Taglennaa aligns S with A with respect to nominal case marking, and S with P as regards marking the number value of core arguments on the verb.[2]

In view of the fact that grammatical relations are morphologically marked on the verb and on the nominal constituent, Taglennaa is both head-marking and dependent-marking on the clause level.[3]

Most data for this paper were provided by the first author of this paper (AI). Additional data were contributed by the first author's brother Gumma Ibrahim Gulfan and Al-Kheir Yaguub Haggaar, all of them mother-tongue speakers of Taglennaa. Cooperation between the two authors took place in Khartoum in 2011 and was continued later by email. The data are not tone-marked and the role of tone in relativization is as yet unknown.

Typological studies such as Dryer's "Order of relative clause and noun" (2011) and Comrie & Kuteva's (2011) description of relativization strategies show that there are two basic types of relative constructions, one where the relative clause follows the head noun and another one where the relative clause precedes the head noun. Languages employ different morphosyntactic devices to differentiate between the various syntactic-semantic roles of the head noun in the relative clause. According to Keenan & Comrie's Accessibility Hierarchy (1977), relativization strategies for core constituents (i.e. subject and object noun phrases) may differ from the ones employed for peripheral constituents. Core constituents are more easily accessible than peripheral constituents.

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[2] The labels S, A and P are adopted from Comrie (2011).

[3] For 'head-marking' and 'dependent-marking' see Nichols (1986).

This is the first study of relative constructions in Taglennaa. Special attention is given to the linear order of the head noun and the relative clause and to the morphosyntactic means by which Taglennaa differentiates between the syntactic-semantic roles of the head noun in the relative clause.

The paper is arranged as follows. Section 2 briefly deals with the morphophonemic changes triggered by the relative marker *-r*. Section 3 is concerned with the relativization of core constituents. The relativization of Beneficiaries and various peripheral constituents is considered in sections 4, 5, and 6. Section 7 summarizes the findings of this paper.

2. Morphophonemic changes triggered by *-r*

The relative clause marker *-r* is a suffix attached to the verb which occupies the final position in the relative clause and is fully inflected (rather than being a non-finite verb or participle).

A sequence of two distinct consonants turns into a geminate by anticipatory assimilation. This applies also to the relative marker *-r*, e.g., *-r=gi → ggi* (ACC), *-r=na → nna* (GEN). Apart from these phonological changes, *-r* triggers several morphophonemic changes.

(i) Verb roots ending in *r* such as *jɪr-* 'lie (SNG)', *jɛr-* 'lie (PLR)', *ŋɛr-* 'cut', *ir-* 'give birth' delete the nasal of the 3rd person suffix of the Present tense *-ʋn* when the relative marker *-r* attaches to that form. The inflectional suffix and the relative marker are assumed to fuse with the root, e.g. *jɪr-ʋn-r → jɪr*, *jɛr-ʋn-r → jɛr*, *ŋɛr-ʋn-r → ŋɛr*, *ir-un-r → ir*. This rule does not appear to be obligatory. At least in case of *ŋɛr-* 'cut' and *ir-* 'give birth', there are alternative 3rd person Present tense forms, *ŋɛr-ʋ-r* and *ir-u-r*.

(ii) In another group of verb roots ending in *r* such as *bɪr-* 'circumcise', *bir-* 'revolve', *ɛr- 'fear', kir-* 'strangle', *ter-* 'change', *tɪr-* 'sow', *ur-* 'kill (SNG)' the fusion of the root with the 3SG/3PL marker of the Present tense *-ʋn* and with the relative marker *-r* results in a form with a short vowel (and an extra-high tone, whereas the corresponding verb forms in paragraph (i) above have a high tone), e.g. *bɪr-ʋn-r → bɪr, bir-un-r → bir, kir-un-r → kir, ter-un-r → ter*.

(iii) If the finite verb form ends in the velar nasal *ŋ*, the relative marker is deleted, as attested in the 2SG and 2PL forms: *kʋɲ-ir-oŋ-r → kʋɲ-ir-oŋ* and *kʋɲ-ir-uŋ-r → kʋɲ-ir-uŋ*. If the finite verb form ends in the alveolar nasal *n*, the relative marker triggers the deletion of that nasal, as attested in the 3SG and 3PL forms, *kʋɲ-un-r → kʋɲ-u-r*.

If the finite verb of the relative clause ends in a vowel, the relative marker simply attaches to that verb form, as attested in the 1SG and 1PL forms of the Present tense, *kuɲ-ire-r* and *kuɲ-iro-r*.

Apart from the changes triggered by *-r*, the verb in the relative clause does not differ from the verb in the main clause. Even the neutralisation of 3SG, 3PL and 1PL INCL verb forms, which occur in the Present (Table 1) and Future (Table 3), are mirrored by the corresponding relativized forms.

Table 1. Morphophonemic changes in Present tense forms

1SG	*id*	*tɪ*	*ɪyɪ*	*kuɲ-irer*	(< *kuɲ-ire-r*)	*ak-ʊn*
2SG	*id*	*tɪ*	*ar*	*kuɲ-iroŋ*	(< *kuɲ-iroŋ-r*)	*ak-ʊn*
3SG	*id*	*tɪ*	*tɪ*	*kuɲ-ur*	(< *kuɲ-un-r*)	*ak-ʊn*
1PL EXCL	*id*	*tɪ*	*ayi*	*kuɲ-iror*	(< *kuɲ-iro-r*)	*ak-ʊn*
1PL INCL	*id*	*tɪ*	*ini*	*kuɲ-iror*	(< *kuɲ-iro-r*)	*ak-ʊn*
~	*id*	*tɪ*	*ini*	*kuɲ-ur*	(< *kuɲ-un-r*)	*ak-ʊn*
2PL	*id*	*tɪ*	*uyi*	*kuɲ-iruŋ*	(< *kuɲ-iruŋ-r*)	*ak-ʊn*
3PL	*id*	*tɪ*	*tɪ*	*kuɲ-ur*	(< *kuɲ-un-r*)	*ak-ʊn*
	person	that	PRO	look.at-PRS.SM.REL		sit-PRS.3

the person at whom I am (you are, etc.) looking is sitting

Table 2. Morphophonemic changes in Past tense forms

1SG	*id*	*tɪ*	*ɪyɪ*	*kuɲ-er*	(< *kuɲ-e-r*)	*ak-ʊn*
2SG	*id*	*tɪ*	*ar*	*kuɲ-oŋ*	(< *kuɲ-oŋ-r*)	*ak-ʊn*
3SG	*id*	*tɪ*	*tɪ*	*kuɲ-umir*	(< *kuɲ-umi-n-r*)	*ak-ʊn*
1PL EXCL	*id*	*tɪ*	*ayi*	*kuɲ-or*	(< *kuɲ-o-r*)	*ak-ʊn*
1PL INCL	*id*	*tɪ*	*ini*	*kuɲ-or*	(< *kuɲ-o-r*)	*ak-ʊn*
~	*id*	*tɪ*	*ini*	*kuɲ-amir*	(< *kuɲ-ami-n-r*)	*ak-ʊn*
2PL	*id*	*tɪ*	*uyi*	*kuɲ-uŋ*	(< *kuɲ-uŋ-r*)	*ak-ʊn*
3PL	*id*	*tɪ*	*tɪ*	*kuɲ-amir*	(< *kuɲ-ami-n-r*)	*ak-ʊn*
	person	that	PRO	look.at-PST.SM.REL		sit-PRS.3

the person at whom I (you, etc.) looked is sitting

Table 3. Morphophonemic changes in Future tense forms

1SG	*id*	*tɪ*	*ɪyɪ*	*kuɲ-iʃa-rer*	(< *kuɲ-iʃa-re-r*)	*ak-ʊn*
2SG	*id*	*tɪ*	*ar*	*kuɲ-iʃa-roŋ*	(< *kuɲ-iʃa-roŋ-r*)	*ak-ʊn*
3SG	*id*	*tɪ*	*tɪ*	*kuɲ-iʃa-ar*	(< *kuɲ-iʃa-an-r*)	*ak-ʊn*
~	*id*	*tɪ*	*ini*	*kuɲ-iʃa-ŋur*	(< *kuɲ-iʃa-ŋun-r*)	*ak-ʊn*

1PL EXCL	*id*	*tɪ*	*ayi*	*kuɲ-iʃa-ror*	(< *kuɲ-iʃa-ro-r*)	*ak-ʊn*
1PL INCL	*id*	*tɪ*	*ini*	*kuɲ-iʃa-ror*	(< *kuɲ-iʃa-ro-r*)	*ak-ʊn*
~	*id*	*tɪ*	*ini*	*kuɲ-iʃa-ar*	(< *kuɲ-iʃa-an-r*)	*ak-ʊn*
~	*id*	*tɪ*	*ini*	*kuɲ-iʃa-ŋur*	(< *kuɲ-iʃa-ŋun-r*)	*ak-ʊn*
2PL	*id*	*tɪ*	*uyi*	*kuɲ-iʃa-ruŋ*	(< *kuɲ-iʃa-ruŋ-r*)	*ak-ʊn*
3PL	*id*	*tɪ*	*tɪ*	*kuɲ-iʃa-ar*	(< *kuɲ-iʃa-an-r*)	*ak-ʊn*
~	*id*	*tɪ*	*tɪ*	*kuɲ-iʃa-ŋur*	(< *kuɲ-iʃa-ŋun-r*)	*ak-ʊn*
	person	that	PRO	look.at-FUT-SM.REL		sit-PRS.3
	the person at whom I will look is sitting					

Two alternative forms exist for 1PL INCL in the Present and Past tenses, three in the Future tense. In the Future tense, there are also alternative forms for 3SG and 3PL. In the Past tense, the distinction between 1PL INCL and 3PL is neutralized; in Table 2 these forms are realized as *kuɲamin* in the main clause and as *kuɲamir* in the relative clause.

3. Relativization of core arguments

In this section, examples are provided illustrating the formation of relative clauses (enclosed in square brackets) by simply suffixing the relative marker *-r* to the finite verb of the relative clause. This strategy is attested by all kinds of subjects and objects, including the Recipient "indirect object" of the verb *ʈi-* 'give', see examples (10) and (11).

The examples offer several insights. (i) The head noun generally precedes the relative clause but there is also one example attesting the head noun following the relative clause, see (30a,b). (ii) The head is outside the relative clause. (iii) The relative clause does not require a pronominal element expressing the syntactic-semantic role of the head noun. That is, there are no relative pronouns such as English *who, which, whom*. (iv) The syntactic role of the head noun in the main clause is expressed by the presence or absence of case markers attached to the relative clause.

In (1), the head noun *tɪ* is the unmarked subject of the main clause, and it is taken up as the subject of the relative clause.

(1)   *tɪ*   [*keer*=*ur*   *jɛr*]   *ɔnna-nɪ*
        cow   [cattle.pen=LOC   lie.PLR.PRS.3PL.REL]   mine-COP.3
        The cows which lie in the cattle pen are mine.

In (2), the head noun *tɪ* is the object of the main clause; its object status is marked by the ACC clitic =*gɪ* which follows the relative clause. Within the

relative clause, *tɪɪ* functions as subject. Since subjects are always indexed by a person suffix on the verb, the presence of the subject pronoun in the main clause is optional.

(2)   *(ɪyɪ)*   *tɪɪ*   [*kire=r*   *jɛg*]=*gɪ*   *kuŋ-e-ʃa-re*
       (1SG) cow [stable=LOC lie.PLR.PRS.3PL.REL]=ACC look.at-PLR-FUT-1SG
       I will look at the cows which lie in the stable.

In (3) the head noun *ɪdʊ* is the subject of the main clause, which is taken up as the subject of a transitive relative clause. The object of the relative clause hosts the ACC case marker.

(3)   *ɪdʊ*   [*katʊ=gɪ*   *ʃʊm-mɪ-r*]   *bar-bol-mi-n*
       woman [field=ACC   weed-PST.3SG-REL] tire-ASP.SNG-PST-3SG
       The woman who weeded the field has become tired.

The sentences in (4) show the word order in the main clause with a lexical subject and a lexical object that is qualified by a relative clause. Example (4a) represents the unmarked order which is Subject – Object [relative clause] – Verb. In (4b) the main clause object together with its relative clause precedes the subject. This deviation from the unmarked SOV order puts the object constituent in focus. Separation of the head noun from the relative clause as in (4c) is not admitted, unless the whole main clause precedes the relative clause, as illustrated in (5).

(4) a. *Ali*   *ɪdʊ*   [*katʊ=gɪ*   *ʃʊm-mɪ-g*]=*gɪ*   *onʈiŋ-ŋi-n*
        Ali   woman [field=ACC weed-PST.3SG-REL]=ACC greet-PST-3SG

     b. *ɪdʊ*   [*katʊ=gɪ* *ʃʊm-mɪ-g*]=*gɪ*   *Ali* *onʈiŋ-ŋi-n*
        woman [field=ACC weed-PST.3SG-REL]=ACC Ali   greet-PST-3SG

     c. **ɪdʊ-gɪ* *Ali*   [*katʊ=gɪ*   *ʃʊm-mɪ-g*]=*gɪ*   *onʈiŋ-ŋi-n*
        woman   Ali   [field=ACC weed-PST.3SG-REL]=ACC   greet-PST-3SG

        Ali greeted the woman who weeded the field.

In (5), the relative clause is separated from its head noun and follows after the main clause; the head noun *ɪlɪ* is case-marked as the object of the main clause and the postposed relative clause is also case-marked.

(5)   *Ali* *ɪlɪ=gɪ*   *onʈig-e-mi-n*
       Ali woman.PL=ACC   greet-PLR-PST-3SG

       [*katʊ=gɪ*   *ʃʊr-amɪ-g*]=*gɪ*
       [field=ACC   weed-PST.3PL-REL]=ACC

       Ali greeted the women who weeded the field.

The head noun *id* functions as the subject of an intransitive relative clause in (6) and a transitive one in (7). In the main clauses *id* has a Possessor role marked by the clitic =*na* which attaches to the relative clause.

(6)   *id*   [*bol-i*=*gi*   *ɛr-ɛ-n*]=*na*   *tʊɲan*
        man   [dog-PL=ACC   fear.PLR-PRS.3SG-REL]=GEN children

        ʃakk-ar-i-ni
        fear-AN-PL-COP.3

        The children of a man who fears dogs are cowards.

(7)   *id*   [*ʃakk-ʊ-n*]=*na*   *ʃaal*=*ʊr*   *bol-i*
        man   [be.fearful-PRS.3SG-REL]=GEN homestead=LOC dog-PL

        bog-en
        bark-PRS.3

        The dogs bark at the homestead of the man who is fearful.

The preceding examples show intransitive and transitive sentences whose subject and object constituents are modified by relative clauses in which the antecedent functions as subject. The relative clause is marked by the suffix *-r*, which is followed by the ACC case marker whenever the head noun functions as the object of the main clause.

The same strategy is also used for object relatives, i.e., relative clauses in which the antecedent functions as object. Object relatives are exemplified in Tables 1 to 3; the same construction occurs in (8).

(8)   *tʊʊ*   [*kanɛn*   *etir-e-r*]   *ta-min*
        child   [past.time   send-PST.1SG-REL]   come-PST.3SG
        The child that I sent some time ago has returned.

If the head noun (antecedent) of a relative functions as the object of the main clause, this is marked by the ACC clitic following the relative clause. This is true for subject relatives and for object relatives.

(9)   *id*   [*(ɾyɪ)*   *kuɲ-e-g*]=*gi*   *bid-i*
        man   [(1SG)   look.at-PST.1SG-REL]=ACC   follow-IMP
        Follow the man at whom I looked.

Both objects of the ditransitive verb *ʈi-* 'give' have ACC case marking (10a). The relativization of the Recipient (10b, 11) follows the same strategy as the one shown above for subjects and direct objects.

(10) a. *id = di   ʈɔŋ = gɪ   ʈi-ɔŋ*
        man = ACC   calabash = ACC   give-PST.2SG
        You gave the calabash to the man.

    b. *id   [ar   ʈɔŋ = gɪ   ʈi-og] = gi   ɪyɪ   ŋal-ɛ*
        man   [2SG calabash = ACC   give-PST.2SG.REL] = ACC   1SG   see-PST.1SG
        I saw the man to whom you gave the calabash.

(11) *id   [ɪdʊ   ʈɔŋ = gɪ   ʈi-mi-g] = gi   ŋal-i*
      man   [woman   calabash = ACC   give-PST.3SG-REL] = ACC   look-IMP
      Look at the man to whom the woman gave a calabash.

4. Relativization of objects licensed by applicative verbs

The verb *ʈi-* 'give' appears to be the only underived basic verb that can have a Theme as well as a Goal or Beneficiary complement. Other ditransitive verbs of this kind are derived verbs extended by the applicative morpheme *-nɖi* or one of its allomorphs (*-bi, -di, -ɖi, -gi, -n*). We assume that this morpheme is a grammaticalized form of the *ʈi-* 'give' verb as attested in Uncunwee, a closely related language (Comfort & Jakobi 2011).

The object licensed by the applicative verb extension is ACC cased marked (12a), just like the Recipient object of the verb 'to give'. In (12b) to (14), the head noun of the relative clause functions as Beneficiary in the relative clause, licensed by the applicative verb extension. The head noun is the subject of the main clause in (12b) and (13); it is the object of the main clause in (14) and the ACC clitic is attached to the relative clause.

(12) a. *ɪdʊ   id = di   kamɛ = gɪ   kiŋ-g-ʊmin*
        woman man = ACC   food = ACC   make-APPL-PST.3SG
        The woman prepared food for the man.

    b. *id   [ɪdʊ   kamɛ = gɪ   kiŋ-g-ʊmɪ-r]   ol-i*
        man   [woman   food = ACC   make-APPL-PST.3SG-REL]   go.out-SSC

        bɛb-bol-jo-n
        lose-ASP.SNG-PRF-3SG

        The man for whom the woman cooked food has disappeared.

(13) *id   [onu-ɲi   ɔnna = gɪ   ʈog-e-n-e-r]   aj-innu-mi-n*
      man   [donkey-PL   my = ACC   left-PLR-APPL   feed-NEG.SNG-PST-3SG
                                  -PST.1SG-REL]
      The man with whom I left my donkeys did not feed them.

(14) *tɛɛndʊ*   [*ʊŋʊ*   *kɪtʊ=gɪ*   *ʃan-ɖi-re-g*] *=gi*
      girl.SG.DIM [this   cloth=ACC   buy.SNG-APPL-PRS.1SG-REL]=ACC

      ɪt-ta-rɛ
      marry-FUT-1SG

      I will marry the girl for whom I am buying this cloth.

Locatives are generally marked by the enclitic =*r* (15a). However, locative
Goal arguments may also be licensed by applicative verbs in which case they
carry the ACC case marker (15b). There is a semantic difference between the
two strategies: the LOC-marked Goal is indefinite, the ACC-marked APPL-
licensed Goal is definite. Relativized Goal arguments are built on
applicatives and do not formally differ from relativized Beneficiaries; see
examples (15c) to (17).

(15) a. *ayi*   *too*   *ɖejji=r*   *ʃɛ-rɔ*
        1PL.EXCL place far=LOC   go.PLR-PRS.1PL
        We are going to a distant place.

     b. *ayi*   *too*   *ɖejji=gi*   *ʃɛ-n-ɪrɔ*
        1PL.EXCL place far=ACC   go.PLR-APPL-PRS.1PL
        We are going to the distant place.

     c. *too* [*ʃɛ-n-ɪrɔ-r*]   *ɖejji=n-ndi*   *ʃɔ-n*
        place [go.PLR-APPL-PRS.1PL-REL] far=LOC-COP.3 be.there.SNG-PRS.3SG
        The place where we are going to is far away.

(16) *katʊ* [*ar*   *ayi=gi*   *et-e-n-iro-r*]
      field [2SG 1PL.EXCL=ACC   send-PLR-APPL-PRS.2SG-REL]

      dɛ=na   *katʊ-a*
      who=GEN   field-Q

      Whose field is it that you are sending us to?

The main clause in (16) contains two instances of *katʊ* 'field', one being the
subject and the other the nominal predicate ("the field … is whose field").

In (17), the head of the relative clause is *too ʊŋʊ=r*, a complex noun phrase
composed of the noun *too*, the demonstrative *ʊŋʊ* and the locative clitic =*r*.
The inherently Source-oriented verb *ta-* 'come' is extended by the applicative
marker -*n* which licenses the Goal constituent. In the main clause, *too ʊŋʊ-r*
is a locative object which is shown by the ACC marker following the relative
clause.

(17) *too*   *ʊŋʊ=r*   [*ta-n-iro-r*]*=gi*   *ini*   *bii*   *kɔ*
     place   this=LOC [come-APPL-PRS.1PL-REL]=ACC   people some   INS

     ak-ɪncɪ-bɛl-jɛ-n
     sit-PLR-ASP.PLR-PRF-3PL

     Some people have settled at this place which we are coming to.

5. Relativization of oblique arguments with *kɔ=*

The morpheme *kɔ* is known from various grammatical contexts:

(i) =*kɔ* serves as an enclitic case marker for peripheral constituents, primarily those with an Instrument role; see (18) to (21).

(ii) *kɔ=* is preposed to verbs resulting in fixed lexicalized combinations; see Table 4.

(iii) *-kɔ* (and its allomorph *-cɔ*) is employed as a suffix deriving adverbs from adjectives and nouns; see Table 5.

(iv) *kɔ* indicates the simultaneousness of events expressed by a converb and a finite verb (see Gulfan, this volume).

The different but presumably related meanings of *kɔ* and its occurrence in distinct grammatical contexts are called heterosemy (cf. Lichtenberk 1991).

(18) *kɔkar=kɔ*   *jɪl-ɪ*
     stone=INS   throw-IMP
     Throw at it with a stone!

(19) *iʃi=kɔ*   *aŋ-ir-i*
     hand=INS   grab-SNG-IMP
     Grab it with (your) hands!

(20) *tɛndʊ*   *tɪrɪ-nɪ=gɪ*   *kɔɲɛ=kɔ*   *eɲ-e-nam-mi-n*
     girl.SG.DIM   girl.PL-DIM.PL=ACC   beauty=INS   exceed-PLR-ASP-PST-3
     The girl exceeded the girls in beauty.

(21) *tɪnna*   *ʊkʊʊ=kɔ*   *bag-i*
     3SG.GEN   vicinity=INS   pass-IMP
     Pass near to it. (lit. pass in its vicinity)

Table 4 shows some fixed *kɔ=*verb combinations. In some cases, e.g., *kɔda-* and *kuʃu-*, the connection has become so close that the phonological shape of the original root (*ta → da*) and preclitic (*kɔ → ku*) has changed.

Table 4. kɔ = verb

ak-	sit	kɔ = ak-	sit with, sit on
jer-	lie	kɔ = jer-	lie on
ʃu-	go (SNG)	kɔ = ʃu-	go with, go by (SNG)
ʃu-	go (SNG)	kuʃu-	take to, lit. go with (SNG)
ta-	come	kɔda-	come with, come by

The close connection between *kɔ* and the verb root has prosodic and grammatical motivations. It is common for a monosyllabic morpheme to attach to a polysyllabic host morpheme.[4] Here the host is a verb and *kɔ* has become its proclitic (rather than a prefix which functions on the morphological level whereas a clitic works on the phrase or clause level). The proclitic *kɔ =* indicates that the verb has a grammatical relation to a peripheral constituent.

Table 5: kɔ as adverbializer

kɛn	good	keŋkɔ	well (adverb)
bur	strong	bukkɔ	firmly
uggun	loud	ugguŋkɔ	(speak) loudly
kɔlal	night	kɔlalcɔ	by night
ʃirin	morning	ʃiriŋkɔ	in the morning

The relativization of peripheral constituents with semantic roles such as Instrument, Location, Goal and Source requires, in addition to the suffixed relative marker *-r*, the proclitic *kɔ =* which immediately precedes the verb of the relative clause. This morpheme has a low tone and a [–ATR] vowel.

The following examples illustrate that the proclitic *kɔ =* assigns different semantic roles to the relativized peripheral constituent referred to by the head noun of the relative clause. The identification of a specific semantic role strongly depends on the semantics of the verb in the relative clause.

The head nouns in (22c) and (23) designate objects that are often used as instruments. *kɔ =* assigns an Instrument role to those head nouns, *kɔʈar* and *kɔkar*. These nouns are the subjects of the main clauses.

(22) a. *eri = gi   kɔʈar = kɔ   ʃɪd-dɛ-mɪn*
      rope = ACC   knife = INS   cut-SNG-PST.3SG
      He cut the rope with a knife.

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[4] We are grateful to Gerrit Dimmendaal (p.c. 26-01-2012) for explaining the possible prosodic motivation for the behaviour of *kɔ* and its proclitic status.

b. *kɔʈar* [*eri = gi*   *kɔ = ʃid-dɛ-mɪ-r*]   …
   knife   [rope = ACC   INS = cut-SNG-PST.3SG-REL]
   the knife he cut the rope with …

c. *kɔʈar* [*ɪyɪ*   *kɔ = ʃir-er-ɛ-r*]   *ɖɔɔ*
   knife   [1SG   INS = cut-FRQ-PST.1SG-REL]   where.3SG
   Where is the knife that I have been cutting with (several times)?

(23)   *kɔkar* [*bol = jɪ*   *kɔ = ett-e-r*]   *ŋakk-ʊ-bol-mi-n*
   stone   [dog = ACC   INS = throw-PST.1SG-REL] break-SNG-ASP.SNG-PST-3
   The stone that I threw at the dog broke.

Examples (24) and (25) show that means of transportation and building materials are grammatically treated as instruments.

(24) a. *wɔkkʊ = r*   *arabiye = kɔ-ndɪ*   *ʃu-min*
     Dilling = LOC   car = INS-COP.3   go.SNG-PST.3SG
     He went to Dilling by car.

b. *arabiye*   [*wɔkkʊ = r*   *kɔ = ʃu-mi-r*]   …
   car   [Dilling = LOC   INS = go.SNG-PST.3SG-REL]
   the car he went to Dilling with …

(25) a. *kel*   *ʊŋʊ*   *didda*   *ʊtɪ-g-adʊ = kɔ-ndɪ*   *ʃɪy-adʊ-nɪ*
     house   this   clay   burn-CAUS-PRTC = INS-COP.3   build-
                                          PRTC-COP.3
     This house is built of bricks. (lit. … built of burnt clay)

b. *didda*   *ʊtɪ-g-adʊ*   [*kel*   *kɔ = ʃɪy-ɪrɪ-ɲɔ-r*]   …
   clay   burn-CAUS-PRTC   [house   INS = build-SNG-PERF.3SG-REL]
   the bricks the house is built of …

In (26a), *kɔ =* marks *ʊŋʊ uta* 'this opening' as the means which facilitates the escape. In the corresponding relative clause (26b) the stranded clitic attaches to the verb.

(26) a. *ʊŋʊ*   *uta = kɔ*   *egi*   *ɛl-amɪn*
     this   opening = INS   goats   escape.PLR-PST.3PL
     The goats escaped through this opening.

b. *ou*   [*egi*   *kɔ = ɛl-amɪ-g*] = *gɪ*   *ʃar-ir-i*
   passage   [goat.PL   INS = escape.PLR-PST.3-REL] = ACC   close-SNG-IMP
   Close the passage by which the goats escaped.

The motion verb *ta-* (*taa-* in the Present tense) designates motion away from a source.[5] Its Source argument is marked by the general locative clitic =*r* within a multiverb construction, see (27a). The corresponding relative clause in (27b) employs the preverbal clitic *kɔ=* pointing to a peripheral argument represented by the head noun *too*.

(27) a. *ayi*   *iri=n-ndi*   *ʃɛ-ɪ*   *ta-rɔ*
     1PL.EXCL   river=LOC-COP.3 be.there.PL-SSC come.from-PST.1PL
     We came from the river.
     (lit. we have been at the river and came from it)

    b. *too*   [*ayi*   *kɔ=ʃɛ-ɪ*   *taa-rɔ-r*]   *ɖejji-ni*
     place [1PL.EXCL INS=be.there.PLR-SSC come-PRS.1PL-REL] far-COP.3
     The place where we are coming from is far away.
     (lit. the place where we have been and come from is far away)

The sentences in (28) provide another example where an argument that has the LOC marker =*r* in a main clause is represented by the clitic *kɔ=* when relativized.

(28) a. *ʊŋʊ*   *too=r*   *ayi*   *ee=gi*   *ɖug-iro*
     this   place=LOC 1PL.EXCL sorghum=ACC thresh-PRS.1PL
     We thresh sorghum in this place.

    b. *ʊŋʊ*   *ter-ndi*   *too*   [*ayi*   *ee=gi*
     this   it-COP.3   place [1PL.EXCL   sorghum=ACC

     kɔ=ɖug-iro-r]
     INS=thresh-PRS.1PL-REL]

     Here is the place where we thresh sorghum.

    c. *too*   [*ayi*   *ee=gi*   *kɔ=ɖug-iro-r*]
     place [1PL.EXCL   sorghum=ACC INS=thresh-PRS.1PL-REL]

     ʊŋʊ   *ter-ndi*
     this   it-COP.3

     The place where we thresh sorghum, it is here.

The transfer verb *kuʃu-* 'take to' is a lexicalized fusion of the proclitic *kɔ=* and the motion verb *ʃu-* 'go'. Its Goal argument is marked with the LOC clitic =*r* or its allomorph =*ʊr* as in (29a). The corresponding relative clause employs the applicative verbal derivation to point to the Goal argument, here represented by the head noun *kʊl* 'well'.

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[5] The applicative derived from *ta-* designates motion towards a goal, cf. (17).

(29) a. *tɪɪ = gɪ*   *kʊl-la-agul = ʊr*   *kuʃu-nk-un*
      cows = ACC   well-GEN-mouth = LOC   take.to.SNG-FRQ-3SG
      He drives the cows to the well.

    b. *kʊl*   [*tɪɪ = gɪ*   *kʊm-ɪ*   *kuʃu-n-i-r*]
      well [cow = ACC   guide-SSC   take.to.SNG-APPL-PRS.3-REL]

      ɖejji = n-ndi   *ʃɔ-n*
      far = LOC-COP.3 be.there.SNG-PRS.3

      The well that he drives the cows to is far.

Examples (30a) and (30b) are interesting because the head noun *too = r* follows the relative clause. It is interpreted as the Location of the event described in the relative clause, and as the Goal of the event described in the main clause. In (30b), remarkably, *too = r* has an additional possessor role as indicated by the genitive case maker = *na* on the relative clause.

(30) a. [*tɪ*   *id*   *kɔ = ak-ʊ-r*]   *too = r*   *ʃu-ɲɔ-ndɛ*
      [that man INS = stay-PRS.3SG-REL]   place = LOC go.SNG-PRF-NEG.3

    b. [*tɪ*   *id*   *kɔ = ak-ʊ-r*] = *na*   *too = r*   *ʃu-ɲɔ-ndɛ*
      [that man INS = stay-PRS.3SG-REL] = GEN place = LOC go.SNG-PRF-NEG.3

      I have never gone to the place where that man is living.

6. Relativization of temporal expressions

The preceding examples illustrate the use of *kɔ* with relativized peripheral constituents having a variety of semantic roles. Constituents having a Time role, however, are not attested with *kɔ*. Rather, the relative clause is marked by the compounded clitic = *n = ɖɔɔ* following the relativizer *-r*. Its elements are the genitive marker = *n* and the noun *ʈɔɔ* 'top'.

In (31), the head of the relative clause is *too ʃiiri*, a phrase marked by the locative case marker *-r*. The verb of the relative clause is marked by the compound clitic *-r = n = ɖɔɔ* which assigns the Time role to the relativized constituent.

(31)   *too*   *ʃiiri = r*   [*ta-rɛ-n = n = ɖɔɔ*]
        time early.morning = LOC [come-PST.1SG-REL = GEN = top]

        ar   *ʃɔ-nnɔŋ*
        2SG be.there.SNG-NEG.PST.2SG

        In the early morning when I came, you were not there.

The head noun of the relative clause in (32), *kanʃɩn,* is a Time expression that it is not marked by the locative case marker =*r*.[6] Again, the verb of the relative clause is marked by *-r=n=ɗɔɔ* assigning the Time role to the head of the relative clause. In the main clause *kanʃɩn* is an unmarked constituent.

(32) *kanʃɩn*   [*Taglɛ=r*   *ʃu-e-n=n=ɗɔɔ*]   *otʊ*
      last.year   [Tagle=LOC   go.SNG-PST.1SG-REL=GEN=top]   water

      ʃɛ-nna-mɩ-n
      be.there.PLR-NEG-PST-3

      Last year when I went to Tagle there was no water.

7. Findings

The paper shows that there is one basic relativization strategy recurring in all relative clauses. This strategy involves the verbal suffix *-r* that is attached to the inflected verb occurring at the end of the relative clause.

The head noun is outside of the relative clause. Most often the head noun precedes the relative clause (but see 30a,b).

Core arguments, i.e. subjects and objects do not require any additional morphological marking to be interpreted as being coreferential with the head noun of a relative clause. The recipient of the verb 'give' as well as objects licensed by the applicative verb extension behave in all respects like other ("direct") objects: they are ACC marked in the main clause and leave no overt trace in the relative clause.

The paper further investigates relativization of several kinds of peripheral arguments:

• Relativization of arguments marked with the instrumental clitic =*kɔ* leaves the clitic stranded in pre-verbal position in the relative clause; see (22)-(26).

• The same proclitic *kɔ=* also appears when arguments marked with the LOC clitic =*r* are relativized; see (27)-(28).

• Use of applicative verbs is an alternative strategy for relativizing LOC marked Goal arguments of certain motion verbs; see (15)-(17) and (29).

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[6] The presence or absence of locative case markers on Time expressions is probably lexicalized (comparable to English 'at night', 'in the morning', 'last year').

• Time arguments in main clauses have various morphological markers including $=k\mathit{ɔ}$ (see Table 5). They are relativized by the compound clitic $=n=\mathit{ɖɔɔ}$ following the relativizer *-r*; see (31)-(32).

The different amount of morphological "material" required for the relativization of core and peripheral arguments suggests that relative clause formation is sensitive to a hierarchy of grammatical relations. According to Keenan and Comrie's noun phrase accessibility hypothesis (1979), core constituents are more easily accessible for relativization than oblique ones. This is confirmed by Taglennaa relative clauses.

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