

Relativization in Kaakye^{i*}

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Abstract

This paper describes the relative clause (RC) in Kaakye, a Kwa (Niger-Congo) language. Evidence is provided to show that Kaakye RC is strictly postnominal and that both the head noun and its referent within the RC are obligatorily expressed. Unlike RCs in some Kwa languages that are close neighbours, the head noun in a Kaakye RC obligatorily takes a determiner. The language also uses the pronoun retention strategy to indicate the canonical positions the head noun occupies in the RC. Where the pronoun retention strategy is used, a resumptive pronoun co-references the head noun in person, number, and animacy to explicitly state the referent of the head noun within the RC. Based on the available synchronic data, we argue that Kaakye object resumptives in RCs are number sensitive unlike other Kwa languages. The paper further demonstrates that all NP positions on the Accessibility Hierarchy are relativizable.

Keywords: *Kaakye, Guan languages, relativization, object resumptives, differential object marking effect, accessibility hierarchy*

Introduction

This paper examines the formation and functions of the relative clause (RC) in Kaakye, a North Guan Tano language in the Kwa sub-group of the Niger-Congo family (Williamson and Blench, 2000; Simons and Fennig, 2018). Kaakye has received some attention in the Kwa literature (Snider, 1989, 1990; Dundaa, 2000, 2005, 2012; Dundaa and Nyaaba, 2007; Korboe, 2001, 2002; Adonae, 2005; Agbedor and Adonae, 2005; Abunya, 2010; Abunya and Amfo, 2013; Kandybowicz and Torrence, 2011, 2012, 2013, 2016, 2017, 2019; and Torrence and Kandybowicz, 2013, 2015). In addition, there has been some work on the formation, structure and function of RCs in Kaakye (Korboe, 2002; Torrence and Kandybowicz, 2015; Kandybowicz and Torrence, 2019). For instance, in his discussion of Kaakye nominal phrase, Korboe (2002, p. 80), shows that, “Kaakye belongs to the group of the languages that uses special markers in forming RC”. Torrence and Kandybowicz (2015, p. 23) indicate that Kaakye RCs “serve as islands for movement” in Wh-question formation. In a recent paper, Kandybowicz and Torrence (2019, p. 70), point out that, “the clausal determiner *wó* occurs phrase-finally in relative clauses” and provide a template of RC formation in Kaakye. This paper builds on these observations and provides a detailed description of Kaakye RC constructions.

RCs in Ghanaian Kwa languages have attracted the attention of linguists for some time. Notable among them are Ewe (Dzameshie, 1995); Akan (Boadi, 2005; Saah, 2010; McCracken, 2013); Logba (Dorvlo, 2008); Tafi (Bobuafor, 2013); and Nkami (Asante and Ma, 2016). These studies, generally, show that RCs in these and related Kwa languages are post-nominal, have restrictive meaning, entail the use of relative markers and involve the use of a pronoun retention strategy and a gap strategy. Though Kaakye RCs display similar features attested in these related languages, the paper highlights some significant features of Kaakye relativization that are of typological relevance. For

instance, it is observed that Kaakye RCs behave differently in the way third person singular animate nouns are realized in object relativization. Kaakye also contradicts the Accessibility Hierarchy (AH) constraints in two ways: first, Kaakye RC formation strategies do not apply to a continuous segment of the hierarchy. Secondly, Kaakye obligatorily uses the pronoun retention strategy in subject relativization. Thus, the description provided in the paper complements and augments what we know about the language and about Guan languages in general and adds to the empirical base of Kwa languages.

The paper is organized as follows: section 2 (Kaakye Language and data sources) provides the language background and gives features of the language that are necessary for the reader, and specifies the data sources. In section 3 (The canonical RC construction (RCC) in Kaakye) the structure of Kaakye RCs is presented. Section 4 (The formation strategies of Kaakye RCs) is devoted to the strategies involved in the formation of the RC. We discuss the form of the relativizer and the head of the RC. Section 5 (Case recoverability problem [CRP]) looks at the strategies employed in recovering the relativized nouns. Section 6 (Noun phrase accessibility hierarchy [NPAH]) examines the NP positions that can be relativized in relation to the AH of Keenan and Comrie (1977). Section 7 (Extraposed RCs) discusses extraposed RCs and section 8 (Summary) concludes the paper.

Kaakye Language and data sources

Kaakyeⁱⁱ is predominantly spoken in the Krachi West District and some towns in the Krachi East District of the Oti Region of Ghana. It has two main dialects, namely Le-ka Kaakye and Oti-ka Kaakye (Adonae, 2005). This study is largely based on the Le-ka dialect since it has more speakers than the Oti-ka dialect and it has been the basis of literacy work in the language.

Kaakye is a tonal language with two basic level tones: high (´) and low (˘), (Adonae, 2005; Snider, 1990). Tonesⁱⁱⁱ play

Table (1): Forms of Kaakye subject pronominal prefixes

Number	Person	Subject pronouns
singular	1 st	mí-/ mi' 'I'
	2 nd	fú-/ fú- 'you'
	3 rd	ò-/ò- (animate) 'S/he' ì-/ì - (inanimate) 'it'
plural	1 st	àlí/àlí- 'we'
	2 nd	bèlí-/ beli- 'you'
	3 rd	bè-/bè- 'they'

(Abunya, 2010, p.75)

The vowels in all the subject pronominal prefixes harmonize with the vowels of the verb stem in terms of their ATR status.

In Kaakye, tense and aspect markers are morphologically fused with the subject markers. Where the verb is inflected for tense and aspect, the vowel in the subject pronoun assimilates the verbal vowel prefixes^{vii} and tones with the exception of the third person subject prefix that only assimilates the tone of the verbal prefixes as illustrated in (4). (see Abunya, 2010 for discussion on the behaviour of the subject pronominal prefixes in Kaakye tense and aspect systems).

- (4) a. Kwaakru é-gyì ágyìbì wú
 Kwaakru PST^{viii}-eat food DET
 'Kwaakru ate the food.'
- b. ó-gyì ágyìbì wú
 3SG.SUBJ.PST-eat food DET
 'He ate the food.'
- c. mé-gyì ágyìbì wú
 1SG.SUBJ.PST-eat food DET
 'I ate the food.'

Kaakye has an SVO word order typical of Kwa languages.

The data for this paper are from both verbal and written sources. The verbal data were collected from native speakers in the Kaakye speaking community during a 7-week fieldtrip in 2015. The corpus includes audio and video recordings of spontaneous spoken text of various genres: folk stories (FS), picture description (PD), procedural texts (PT), and elicited data. The examples taken from these genres are identified by the codes as indicated in brackets in the preceding sentence. The written data were from Bible passages, papers and theses. The language consultants who were also staff members of the Ghana Institute of Linguistics and Literacy Translation (GILLBT) Kaakye Project provided assistance with data verification and interpretation.

The canonical RC construction (RCC) in Kaakye

This section discusses the canonical relative construction of Kaakye RCCs as illustrated in examples (5b and c) below. The relative marker is shown in bold, the head nouns are underlined and the RCs are enclosed in square brackets^{ix}.

- (5)a. Ònyìní wú é-dè òkyí wú.
 man DET PST-hit woman DET
 ‘The man hit the woman.’ (Elicited)

Subject relativization

- b. Ònyìní wú [ké ó-dè òkyí
 man DET REL 3SG.SUBJ.PST-hit woman
 wú] wú b̀ òfí.
 DET CD be here
 ‘The man who hit the woman is here.’ (Elicited)

Object relativization

- c. Mé-̀nù òkyí wú [ké ònyìní
 1SG.SUBJ.PST-see woman DET REL man
 wú é-dè Ø] wú.
 DET PST-hit 3SG.OBJ CD
 ‘I saw the woman whom the man hit.’ (Elicited)

In Kaakye, the head noun always precedes the RC. As shown in (5b), the head noun ònyíni wú ‘the man’ occurs on the left of the RC ɔ̄-dè ‘he hit’. In other words, the RC is postnominal. There is an overt resumptive pronoun in the RC ò ‘he’ that is co-referential with the head noun. However, example (5c) has a null-object.

Structurally, the RC has a basic structure of an independent clause. It has a predicate and core argument required by the predicate. In (5b) the RC predicate is dè ‘hit’. In (5b), it takes ò ‘he’, a resumptive pronoun, and òkyí wú ‘the woman’ as arguments and in (5c) it takes ònyíni wú ‘the man’ and Ø ‘null object pronoun’ as arguments. Again, in the relativization process the tense on the verb in (5a) is maintained. Finally, the end of the RC is marked by the clause-final determiner wú.

The formation strategies of Kaakye RCs

The discussion in the section headed “The canonical RC construction (RCC) in Kaakye” above shows that Kaakye achieves relativization through the use of a relativizer, pronoun retention strategy and a clause-final determiner. Also, regarding the position of the head noun with respect to the RC, Kaakye displays a post-nominal, head-external RC. In what follows, we present the features of each of these strategies.

The relativizer and the clause-final determiner

Kaakye employs an obligatory invariant relative marker *ké* to introduce RCs and most often the RCs end with a clause determiner^x (Kandybowicz and Torrence, 2019).

Ké is obligatory. When it is absent, as illustrated in (6), the sentence is rendered ungrammatical.

- (6) Bé-ŋù pènté wú [*(ké)
 3PL.SUBJ.PST-see frog DET REL
 bè-búti
 3PL.SUBJ.PROG-search CD

‘They saw the frog that they were searching for.’ (PDT1)

It is worth mentioning that both *ké-* and *wú* are multi-functional. In addition to being a relative marker, *ké* also functions as a future marker when it is prefixed to a verb stem as in (7). *Ké-* also functions as a complementizer as exemplified in (8).

- (7) Ama **ké-ḡésì** kúnù wú
 Ama FUT-smoke fish DET
 ‘I will smoke the fish.’ (PT1)
- (8)a. Kofi **ké-yìrí** Kwame [**ké^{xi} ò-gyì** àgyibí wú]
 Kofi FUT-force Kwame COMP 3SG.SUBJ food DET
 ‘Kofi will force Kwame to eat the food’.
- b. Wàà àniyá [**ké** fù-bà].
 do.IMP hard COMP 2SG.SUBJ.PRES-come
 ‘Try hard to come.’ (Elicited)

Besides its function as a clause final determiner, *wú* also functions as a definite determiner, distal demonstrative determiner as illustrated in (9a) or third person singular object pronoun as shown in (9b).

- (9)a. Kùtùḡtùḡ **wú** sà Anaànsí kùpwì sù
 gourd DET/DDD hang.STAT Spider stomach on
 ‘The gourd hangs on spider’s stomach.’ (FST5)
- b. Ama **ké-kààpú** wú
 Ama FUT-teach 3SG.OBJ
 ‘Ama will teach her.’ (Elicited)

In example (9a) ascertaining the exact function of *wú* in relation to *Kutuytuy* ‘gourd’ as definite determiner or distal determiner is ambiguous since the formal presentation is the same. One can distinguish its function based on context. Its function as a distal determiner may be conveyed by appealing to appropriate

- (12) Ònyìní wú [kḗ ò-bè-ḡè iyú] wú
 Man DET REL 3SG.SUBJ.HAB-come-cut trees
 é-wù.
 PST-die
 ‘The man who comes to cut the trees is dead.’ (Elicited)

In (13), the head noun is the object of the MC, and the relativized NP is the object of the RC.

- (13). Mé-ḡù ònyìní wú [kḗ Ama
 1SG.SUBJ.PST-see man DET REL Ama
 é-fùḡ Ø] wú.
 PST-marry 3SG.OBJ CD
 ‘I saw the man whom Ama married.’ (Elicited)

Types of head nouns

In this subsection, we examine the syntactic categories that can serve as the head of the relative construction in Kaakye. Usually, the head of the relative construction is a common noun as shown in (13) above and (14) below. However, proper nouns can also function as heads of RCs, as in illustrated in (15).

- (14) Kìkùtú wú [kḗ í-bù kòlò] wú tò
 orange DET REL 3SG.SUBJ-be pot CD in
 é-nyitḗ.
 PROG-rotten
 ‘The orange which is in the pot is getting rotten.’(Elicited)
- (15)a. Mí-gyì Kwame wú [kḗ
 1SG.SUBJ-be Kwame DET REL
 mḗ-bè ḡfùḡ] wú.
 1SG.SUBJ.PST-come here CD
 ‘I am Kwame, who came here.’ (Elicited)

- b. Kofi wú [kɛ́ ó-kírì kí-kìní
 Kofi DET REL 3SG.SUBJ.HAB-like NOMZ-roam
 kyùṅ fù wú ɛ-fwì.
 than 2SG.OBJ CD be-missing
 ‘Kofi who likes roaming than you is missing.’ (Elicited)

The names of persons, Kwame in (15a) and Kofi in (15b), occur as the head noun in the relative construction.

The head noun can also be a personal pronoun (16), or a definite pronoun (17):

- (16)a. Mì wú [kɛ́ ŋ-gyì Adam
 1SG.SUBJ DET REL 1SG.SUBJ-be Adam
 mì gyì wú, m-m-bà
 3SG.POSS child CD, 1SG.SUB-NEG.PST-come
 fɛ́ɛ bɛ-sùṅ wì.
 Like 3PL.SUBJ.-serve 2SG.OBJ
 ‘I, who am the son of Adam, did not come to be served.’
 (Mark 10:45)

- b. Àrí wú [kɛ́ arɪ-gyì àsìpù-kùkyù
 1PL.SUBJ DET REL 1PL.SUBJ-be tribe
 lɛlɛ] wú ɛ-lù Borae.
 big CD PROG-come.from Borae
 ‘We, who are a big tribe, come from Borae.’ (Elicited)

- (17)a. Bùó [kɛ́ bùó ànyísí ñ-dè wú.
 3PL.SUBJ REL their eyes PST.NEG-sleep CD
 ‘Those who are not vigilant. (Lit: them that their eyes
 did not sleep)’ (PYT1)

- b. Òmù [kḗ ó-tè kèwùrágyá] wú
 the.one REL 3SG.SUBJ.HAB-sit throne CD
 sù ì-gyì Wùrúbwàrí.
 top STAT.be God
 ‘He who sits on the throne, is God.’ (Revelation 4:9)

Indefinite pronouns (18) and adverbs (19) can also function as head nouns in RCC.

- (18) Òkúmàní [kḗ ò-ké-kyòṅ] ñfùḡ] wú
 everyone REL 3SG.SUBJ-FUT-pass there CD
 ñté ó-bísà, wú fḡḡ, ñsé
 then 3SG.SUBJ.HAB-ask 3SG.OBJ COMP whose
 kìsàrí nò?
 hand this?

‘Everyone who will pass there asks “whose hand is this?”’ (FST2)

- (19) Kéké kúmànòṅ [kḗ àrí-ké-gyèkí ñfí] wú
 day every REL 2PL.SUBJ-FUT-meet here CD
 fù nyè àsìḡ b̀d̀d̀é sè àrí
 2SG.SUBJ get.PRES matter sweet give 3SG.OBJ
 ‘Every day that we will meet here you give us nice message.’ (PYT1)

The head noun and determiners

Usually, a head noun modified by an RC in Kaakye takes a determiner. Determiners that are often used in Kaakye RC include: *wú* ‘the/that’ (20), *ní* ‘this’ (21), *kú* ‘some/a certain’ (22) and *kéniḡ* ‘like this/that’ (22).

(20) Bé-ḡù pènté wú [ké bè-bùtí
 3PL.SUBJ.PST-see frog DET REL 3PL.SUBJ.PROG-search
 Ø] wú.
 3SG.OBJ CD

‘They saw the frog that they were searching for.’ (PD1)

(21) Nètí nì [ké ì-bù kési] wú
 net PDD REL 3SG.SUBJ.INANM-be under CD
 mì-sè ìkú bè dòḡé sù.
 1SG.SUB.take some come lie.on top

‘I take some of this net that is under (pointing at it) and I put it on top.’ (PT2)

(22) Bòdólí kú [ké Kofi é-tùkyóhí ñfìḡ] wú
 Ball INDEF REL Kofi PST-throw away here CD
 gyì òpìpé.
 COP.be red

‘A certain ball that Kofi threw here is red.’ (Elicited)

(23) Mé-ḡù kénìḡ òkyí wú/ní [ké
 1SG.SUBJ.PST-see MDA woman DDD/PDD REL
 ó-bè ñdiyé] wú.
 3SG.SUB.PST yesterday CD

‘I saw that/this woman who came yesterday.’ (Elicited)

Thus, in Kaakye, the occurrence of a determiner on the head noun is, to a large extent, obligatory. When the head noun occurs without a determiner as observed in (24), the RC construction will be ill-formed.

- (24) *Nyìní ?? [kḗ ó-dé Ama] wú
 man DET REL 3SG.SUBJ.PST-hit Ama CD
 bù ñfí.
 be.LOC here
 ‘The/that man who hit Ama is here.’

There are, however, a few exceptions where the determiner may be optional or may not occur. Consider example (25) below. It is observed that the relativized NPs do not take the determiner *wú*.

- (25)a. Òmú [kḗ ò-té kèwùtágyá]
 the.one REL 3SG.SUBJ.PRES-sit throne
 wú sù ì-gyì Wurubwari.
 CD top STAT-be God
 ‘He who is sitting on the throne, is God.’ (Revelation 4: 9)

- b. Ìní [kḗ ɪ-bv kíkèntén]
 this.one REL 3SG.SUBJ-be.LOC basket
 wú tò] wú bù Ìtì.
 DET inside CD COP.be beautiful
 ‘This one that is inside the basket is beautiful.’ (Elicited)

In other Kwa languages like Akan as shown in (26) the definite determiner before the relativizer is optional. According to Saah (2010, p.94), “when an antecedent occurs without a determiner, it yields generic reference, if the verb takes the future tense”.

- (26)a. [_{NP}[_{NP} Abofrá] [_{CP} áà [_{IP} Kofi hu-u nó]] nó]]
 Child REL Kofi see-PST 3SG CD
 á-!bá.
 PERF-come
 ‘The child whom Kofi saw has come.’

- b. [_{NP}[_{NP} Abofrá **nó**] [_{CP} áà [_{IP} Kofi hu-u **nó**]]] **nó**]]
 Child DEF REL Kofi see-PST 3SG CD
 á-!bá.

PERF-come

‘The child whom Kofi saw has come.’ (Saah, 2010, p.94)

The obligatory occurrence of the determiner on the relativized NPs in Kaakye runs contrary to Nkami as shown in (27). In Nkami, relativized NPs do not accept a definite determiner before the relativizer as shown in (27b and c).

- (27)a. ɔɲɪɪ **ní** [wó-ɲú mó] amó
 man REL 2SG.SUBJ-see 3SG.OBJ REL
 bɔ China
 be.in China.

‘The/that man you saw is in China.’

- b. *ɔɲɪɪ ɲá **ní** [wó-ɲú mó]
 man DEM REL 2SG.SUBJ-see 3SG.OBJ
 amó bɔ China
 REL be.in China.

‘This man you saw is in China.’

- c. *ɔɲɪɪ amó **ní** [wó-ɲú mó]
 man DET REL 2SG.SUBJ-see 3SG.OBJ
 amó bɔ China
 REL be.in China.

‘The/that man you saw is in China.’ (Asante and Ma, 2016, p.35)

Besides the occurrence of a determiner on the head noun modified by the RC, the RC is required to end with the clause (final) determiner *wó*. It is worth mentioning that the form *wó* is multi-functional in Kaakye. As explained in example (20) and (23) above, *wó* functions as a definite determiner and a distal

demonstrative, respectively. *Wú* also functions as an object pronoun as shown in (28).

- (28) Yì ó-bìsá wú fèè fù kòyùrí
 And 3SG.SUBJ 3SG.OBJ COMP 2SG.POSS body
 b̀̀ f̀̀-gyá..
 be SM-pain
 ‘And he asked him (if) his your body in pain...’ (FST3)

As a clause determiner, *wú* serves to modify the whole RC. Most Kwa languages like Fon (Lefebvre, 1993) Akan Ewe (Dzameshie, 1995) behave like Kaakye in having a clause final determiner. According to Saah (2010, p.96), a clause determiner exists “to indicate old or known information” to the interlocutor and also conveys deictic information”. The clause determiner *wú* in Kaakye also carries out a similar role and its occurrence is to a large extent obligatory^{xii}. The omission of the clause determiner in (29) renders the sentences ungrammatical.

- (29)a. *Ònyìní wú [ké ó-dè òkyí
 man DET REL 3SG.SUBJ.PST-hit woman
 wú] *(wú) b̀̀ ñfi.
 DET be here
 ‘The man who hit the woman is here.’ (Elicited)
- b. *Mé-ḡù òkyí wú [ké ònyìní
 1SG.SUBJ.PST-see woman DET REL man
 wú è-dè Ø] *(wú).
 DET PST-hit 3SG.OBJ
 ‘I saw the woman whom the man hit.’ (Elicited)

Case recoverability problem (CRP)

One issue often discussed in the RC construction literature is the case recoverability problem (Keenan, 1985). This has to do with how the grammatical relation of the referent of the head noun within the RC is expressed to avoid ambiguity. Languages

vary in how the relativized element, that is, the element within the RC that is co-referential with the head noun, is expressed. Discussing the cross-linguistic relativization strategies employed to resolve the case recoverability problem in the languages of the world, Kuteva and Comrie (2005) identify six classification strategies. Out of the six, only three were noted to occur in the 54 African languages examined. These are pronoun-retention, gap, and correlative strategies. In the literature (Kuteva and Comrie, 2005; Dixon, 2010), the term ‘gap strategy’ is often used to refer to situations where the head noun does not explicitly occupy the position relativized in the RC. On Akan, Saah (2010, 2017) argues that the term ‘gap strategy’ is not applicable to RCs since in Akan a resumptive pronoun is always expressed or understood to be present in the relativization site even if the head noun is not explicitly expressed. According to him, “relative clauses in Akan, unlike English, are not derived from structures where the relativized noun undergoes A-movement where there are missing arguments or gaps” (Saah 2010, p.99). Following Saah (2010), we use the term null object instead of gap since Kaakye, a related Kwa language, behaves similarly. Kaakye, as it will be shown, employs the pronoun retention strategy to resolve the CRP. We discuss this strategy in the ensuing sub-section.

Pronoun retention strategy

In the pronoun retention strategy, “a resumptive personal pronoun referring to the head noun explicitly occupies the position relativized in the RC” (Kuteva and Comrie, 2005, p.211). In Kaakye, the resumptive personal pronoun referring to the head noun may be overtly or covertly coded in the position relativized in the RC. All animate and inanimate head nouns are overtly coded in subject relativization. However, in object relativization, it is only the plural animate head nouns that are overtly coded. All inanimate head nouns and singular animate head nouns are covertly coded in object relativization. Typically, in Kaakye RC, just like other Kwa languages such as Akan (Saah,

2010) and Ewe (Dzameshie, 1995), when a resumptive pronoun is overtly coded, it agrees with the head noun in number, person and animacy. Consider the following examples:

- (30)a. Kiyàfòrì wú [ké ó-tà mù
 boy DET REL 3SG.SUBJ.PST-take 3SG.POSS
 náná yàà bàrá] wú é-sìríníj yà gyírì
 grandmother go hide CD PST-run go tell
 àsíj wú wà mù náná.
 Matter DET do 3PL.POSS grandmother
 ‘The young boy who hid his grandmother ran to inform
 his grandmother.’ (FST3)
- b. Nyàfòrì wú [ké bè-tà bùó
 boys DET REL 3PL.SUBJ.PST-take 3PL.POSS
 náná yàà bàrá] wú é-sìríníj yà gyírì
 grandmother go hide CD PST-run go tell
 àsíj wú wà bùó náná.
 matter DET tell 3PL.POSS grandmother
 ‘The young boys who hid their grandmother run to
 inform their grandmother.’ (FST3)
- c. Kpàkùrù é-wà mù gyì fèè
 hawk PST-tell 3SG.POSS child COMP
 ò-ké-kù kítá wú [ké í- bù
 3SG.SUBJ-FUT-look thing DET REL 3SG.SUBJ.PRES.be
 òkoto wú tò wú].
 sack DET in CD
 ‘The hawk told his child that he will look at the thing which is
 inside the sack.’ (FST4)

d. Mé-ḡù àkyí wó [kḗ Ama é-dè
 1SG.SUBJ.PST-see women DET REL Ama PST-hit
 b̀̀́] wó.
 3PL.OBJ CD

‘I saw the women whom Ama hit.’ (Elicited)

The examples in (30) show that a resumptive pronoun must be present in the canonical position that the head occupies in the RC. In (30a), (30b) and (30c) the resumptive pronouns ɔ, bɛ and ɪ occupy the subject position in the RC while bʋɔ occupies the object position in (30d). These resumptive pronouns also agree with their respective head nouns *kìyàf̀̀rì* ‘boy’ (30a), *̀̀̀yàf̀̀rì* ‘boys’ (30b), *kìtá* ‘thing’ (30c) and *a-kyi* ‘women’ in person and in number.

In (30a) and (30b) where the head nouns are animate, they are co-referential with the animate subject pronouns ɔ - ‘he’, bɛ ‘they’ and in (30d) with the animate object pronoun b̀̀́ ‘them’. On the other hand, where the head noun is inanimate *kìtá* ‘thing’ in (30c), it is co-referenced with an inanimate subject pronoun ɪ - ‘it’. Thus, besides number and person agreement between the head noun and the resumptive pronoun, Kaakye also marks animacy distinction within the RC.

Omitting the resumptive pronouns as in (31) results in unacceptable sentences. Thus, the presence of the resumptive pronoun is obligatory.

(31)a. *Kìyàf̀̀rì wó [kḗ ??-tà m̀̀
 boy DET REL 3SG.SUBJ.PST-take 3SG.POSS
 náná yàà bàrá] wó é-sìríníȳ yà g̀̀rì
 grandmother go hide CD PST-run go tell
 àsú̄ wó wà m̀̀ náná.
 matter DET do 3PL.POSS grandmother

‘The young boy who hid his grandmother ran to inform his grandmother.’ (FST3)

- b. *Mé-ṅù àkyí wú [ké Ama é-dè
 1SG.SUBJ.PST-see women DET REL Ama PST-hit
 ???] wú.
 3PL.OBJ CD
 ‘I saw the women whom Ama hit.’ (Elicited)

Now let us consider the examples (32a), (32b), and (32c).

- (32)a. ṅ-ké-bú òtèè ní.
 1SG.SUB-FUT-sing story this
 ‘I will tell this story.’ (PDT1)
- b. Òtèè ní [ké ṅ-ké-bú Ø] wú,...
 story this REL 1SG.SUB-FUT-sing 3SG.OBJ CD
 ‘This story that I will tell,...’ (FS2)
- c. Kènyìnsé wú [ké ò-nyì Ø]
 young.boy DET REL 1SG.SUBJ.PRES-know 3SG.OBJ
 wú è-lù Ɔsramani.
 CD PROG-come.from Ɔsramani
 ‘The young boy I know comes from Ɔsramani.’ (Elicited)

In (32b) the head noun is inanimate and in (32c) the head noun is animate. The object resumptive pronouns in (32b and 32c) are null as indicated by the symbol Ø. Thus, the relativized nouns which are co-referential with the head noun are not explicitly stated in the RC. Note that when the null object is replaced with resumptive pronouns in the canonical positions, as illustrated in (33), the sentences are ungrammatical. Thus, the null object pronoun is obligatory.

- (33)a. *Òtèè ní [ké [ṅ-ké-bú yù] wú,...
 story this REL 1SG.SUB-FUT-sing 3SG.OBJ CD
 ‘This story that I will tell.’

- b. *Kènyìnsé wú [ké [ñ-nyì wú]
 young man DET REL 1SG.SUBJ.PRES-know 3SG.OBJ
 wú è-lù Òsramani.
 CD PROG-come.from Òsramani
 ‘The young man I know comes from Òsramani.’

An interesting point to highlight here is that in Kaakye RC, all inanimate head nouns and plural animate head nouns are covertly coded in object relativization. Singular animate nouns in object relativization do not take resumptive pronouns. Consider example (34) below where the relativized NP is a plural animate noun.

- (34) Anyìnsé wú [ké ñ-nyì b̀̀́]
 young men DET REL 1SG.SUBJ.PRES-know 3PL.OBJ
 wú è-lù Òsramani.
 CD PROG-come.from Òsramani
 ‘The young men I know come from Òsramani.’

It is noticeable that the object resumptive pronoun *b̀̀́* ‘them’ is co-referenced with the head noun *anyìnsé* ‘young men’ and it agrees with it in number, person and animacy. In (33b) an object resumptive pronoun is overtly expressed at the canonical position and the sentence becomes ill-formed.

This behaviour is different compared to the other Kwa languages such as Akan (35) and Nkami (36).

- (35) Obáá, áà [me-nim nó,] nó fi Takoradi.
 woman REL 1SG-know 3SG CD come.from Takoradi
 ‘The woman I know comes from Takoradi.’
 (Saah 2010, p.98)

- (36) Ma-á-kpá ɔkplí nɪ [John ɲú mó] amó
 1SG-HAB.NEG-like dog REL John see 3SG.OBJ REL
 ‘I don’t like the dog that John saw.’
 (Asante and Ma 2016, p.46)

In these languages animate head nouns irrespective of number take overt object resumptive pronouns in object relativization. Nkami (36) has different forms for the third person singular object. In Akan (35), the third person singular animate object has the same form as the –“clausal determiner”– but it can occur with the clausal determiner. Kaakye is, therefore, different in the strategy it employs for the third person singular animate object in object relativization. Kaakye takes a null object while Akan, Nkami and other Kwa languages employ pronoun retention strategy. Based on the behaviour of the third person singular animate object, we argue that there is number effect on the Differential Object Marking (DOM)^{xiii} in Kaakye RCs. In other words, in contrast to Akan and Nkami, animacy^{xiv} alone is not responsible for the absence or presence of an object resumptive; rather, animacy interacts with number in Kaakye. Kaakye object resumptives in RCs are number sensitive.

Even though this effect on DOM in Kaakye RC is not commonly attested in many Kwa languages, it is cross-linguistically attested (Rodriguez-Mondoñedo, 2007; Bošković, 2009). For instance, in Serbo-Croatian (a Slavic language) object relatives, resumptive pronouns are obligatory when the relativized NP is animate (37) and optional when the relativized NP is inanimate (38) (Bošković, 2009, p.4). However, when the relativized NP is plural inanimate, resumptive pronoun is obligatory (39). In the discussion of the obligatoriness or optionality of resumptives in Serbo-Croatian (a Slavic language) relatives, Bošković (2009, p.5) notes that “even though resumptive is optional with inanimates (38) they become obligatory with plural inanimate in Serbo-Croatian *što* relatives (39)”.

- (37) čovjek što ga je sreo/*čovjek što je sreo
man that him is met
'The man that he met.' Bošković (2009, p.4, ex.10)
- (38) taj brod što su kupili/ taj brod što su ga kupili
that ship that are bought/ that ship that are him bought
'That ship that they bought.' Bošković (2009, p.5, ex.13)
- (39) Brodovi što su ih kupili/??brodovi što su kupili
ships that are them bought
'Ships that they bought.' Bošković (2009, p.6, ex.22)

Bošković (2009, p.4) also cites a similar case of number sensitiveness attested in Kannada (also a Slavic language) DOM where “all plural NPs take resumptive pronouns including those that are not subject to DOM when singular”.

Our argument is that, significantly, Kaakye object relatives exhibit similar number sensitivity effect phenomenon on DOM. This argument supports the claim that “the notion of animacy encompasses different intertwining factors rather than animacy in its literal sense” (Iemmolo, 2014, p.67).

Noun phrase accessibility hierarchy (NPAH)

One other feature that characterises RCs is the different syntactic roles that are accessible to relativization. To characterize cross-linguistic universals in RC formation, Keenan and Comrie (1977) proposed an “accessibility hierarchy” (figure 1) whereby syntactic positions in the clause are essentially structured relative to one another.

Subject > Direct Object > Indirect Object > Oblique > Possessor > Object of Comparison

(Keenan and Comrie, 1977, p.66)

Figure 1: Noun Phrase Accessibility Hierarchy

What this implicational scale suggests is that if a language can relativize a particular syntactic role on the hierarchy, then it can relativize all other syntactic roles above, but not vice-versa. This hierarchy makes a typological prediction as well as a synchronic prediction for individual languages. The typological prediction is that most or all languages will permit noun phrases in subject position to be relativized, but a lesser number of languages will permit those in object position to be relativized; still fewer will permit relativization of those in indirect object position, and so on. Synchronically, individual languages are expected to also observe the hierarchy. That is, if a language permits indirect object relativization, it must also permit direct object and subject relativization. It does not ‘skip’ levels in the hierarchy by permitting indirect objects and subjects, while disallowing direct objects.

Keenan and Comrie (1977) also observe that a language may provide more than one means for relativization. For example, if a particular grammatical construction relativizes subject noun phrases only, the language may provide a different, say periphrastic means, for relativizing noun phrases in other positions. Again, they claim that “any RC-forming strategy must apply to a continuous segment of the AH” (Keenan & Comrie, 1977, p.67).

In this section, we examine the accessibility hierarchy and its predictions in relation to Kaakye. We show that Kaakye typically permits relativization of noun phrases in all positions and appears to bear out the predictions of the accessibility hierarchy. Subjects, direct objects, indirect objects and possessors may all be relativized using the pronoun retention strategy and no skipping of items in the hierarchy occurs.

Subject position

The subject NPs of examples (40a, 41a, and 42a) are relativized in (40b, 41b, and 42b).

- (40)a. Ọnyìní wú é-ηè iyù
 man DET HAB-cut trees
 ‘The man cuts trees.’
- b. Ọnyìní wú [kḗ ó-ηè iyù] wú
 man DET REL 3SG.HAB-cuts trees CD
 ékà-tù òkpà.
 PERF-travel road
 ‘The man who cuts trees has travelled.’ (Elicited)
- (41)a. Anyìní wú é-ηè iyù.
 men DET PST-cut trees
 ‘The men cut trees.’
- b. Anyìní wú [kḗ bḗ-ηè iyu] wú
 men DET REL 3SG.PST-cut trees CD
 ékà-tù òkpà.
 PERF-travel road
 ‘The men who cut trees have travelled.’ (Elicited)
- (42)a. Kikùtú wú b̀ kòlò wú t̀.
 orange DET be.LOC pot DET inside
 ‘The orange is in the pot.’
- b. Kikùtú wú [kḗ í-b̀ kòlò]
 orange DET REL 3SG.SUBJ.INANM-be.LOC pot
 wú t̀ é-fwì.
 CD inside PST-missing
 ‘The orange that was in the pot is missing.’ (Elicited)

The modified head nouns ò-nyìní ‘man’ (40b), à-nyìní ‘men’ (41b) and *ki-kùtú* ‘orange’ (42b) are co-referential with the subject resumptive pronouns of the RCs and they agree with them in person, number and animacy. So, the highest NP position in the NPAH, the subject, is accessible to relativization through the pronoun retention strategy.

Direct Object

Direct object positions are also accessible to relativization. Direct object is used here to refer to the theme of transitive constructions (as underlined in (43a) and (44a) and the recipient of ditransitive constructions as underlined in (43a).

- (43)a. Ama é-sùwá kègyifòrì wó.
 Ama PST-carry child DET
 ‘Ama carried the child.’
- b. Kègyifòrì wó [ké Ama é-sùá Ø] wó
 child DET REL Ama PST-carry 3SG.OBJ CD
 è-sù.
 PROG-cry
 ‘The child Ama carried is crying.’ (Elicited)
- (44)a. Ama é-sùwá ñgyifòrì wó.
 Ama PST-carry children DET
 ‘Ama carried the children.’
- b. Ngyifòrì wó [ké Ama é-sùá b̀̀̀] wó
 children DET REL Ama PST-carry 3PL.OBJ CD
 è-sù.
 PROG-cry
 ‘The children Ama carried are crying.’ (Elicited)

The direct objects relativized in (43b) and (44b) are all animate nouns. The singular direct object *kègyifòrì* ‘child’ of the verb *sùwá* ‘carry’ in (43a) is relativized in (43b). As observed in (43b), the canonical position in which *kègyifòrì* ‘child’ occurs in the RC takes a null object. In (44b), however, the canonical position of the plural direct object *ñgyifòrì* ‘children’ in the RC is marked by an object resumptive pronoun *b̀̀̀* ‘them’. The object noun which the RC modifies in (44b) is, therefore, co-referential with the object pronoun of the RC and it agrees with it in person, number and animacy.

In example (45a) the inanimate direct object *àtèbú* ‘yeast’ is relativized in (45b) and it takes a null object.

- (45)a. N-dè àtèbú wú.
 1SG.SUBJ-have yeast DET
 ‘I have yeast.’
- b. Àtèbú wú [kɛ̀ n-dè Ø] wú
 yeast DET REL 1SG.SUBJ.PRES-have 3SG.OBJ
 wú mé-yàà sùò.
 CD 1SG.SUBJ- PST-go buy
 ‘The yeast that I have I went to buy.’ (PT2)

In (46a), the direct object *ànyìní* ‘men’ of the di-transitive verb *sɛ̀* ‘give’ is relativized in (46b).

- (46)a. Òkyí wú é-sɛ̀ ànyìní wú ònkyù wú
 woman DET PST-give men DET water DET
 ‘The woman gave water to the men’
- b. Anyìní wú [kɛ̀ òkyí wú é-sɛ̀
 men DET REL woman DET PST-give
 bɔ̀ó ònkyù] wú é-wù.
 3SG.OBJ water CD PST-die
 ‘The men to whom the woman gave water are dead.’
 (Elicited)

Indirect Object

The indirect object is used here to refer to the patient of a ditransitive construction as underlined in (47a) and (48a). Indirect objects are also accessible to relativization as illustrated in (47b and 48b).

- (47)a. Òwùrá wú é-sè òkùrápù ìgyò wú
 chief DET PST-give widow yams DET
 ‘The chief gave the widow yams.’
- b. ìgyò wú [ké òwùrá wú é-sè Ø
 yams DET REL chief DET PST-give 3SG.OBJ
 òkùrápù wú gyì àlèlè.
 widow CD be.STAT big
 ‘The yams which the chief gave to the widow are big.’
 (Elicited)
- (48)a. Fé-sè wì àtùrí wú.
 2SG.SUBJ.PST-give 1SG.OBJ goats DET
 ‘You gave me the goats.’
- b. Atrobea é-mò àtùrí wú [ké
 Atrobea PST-kill goats DET REL
 fě-sè wì Ø wú.
 2SG.SUBJ.PST-give 1SG.OBJ 3SG.OBJ CD
 ‘Atrobea killed the goats which you gave me.’ (Elicited)

The inanimate indirect object *ìgyò* ‘yams’ in (40b) and animate indirect object *àtùrí* ‘goats’ (41b) are covertly expressed.

Oblique

Following Payne (1997, p. 48) we use the term oblique to refer to “optional participants” in constructions. In this sense, locative NPs (49) and temporal adjuncts (50) are obliques. They are accessible to relativization in Kaakye.

- (49)a. Ònyíní wú é-sùò àgyíbí wú sè kègyífòrí
 man DET PST-buy food DET give child
 wú ñfùjì.
 DET here
 ‘The man bought the food for the child here.’

- b. Ñfùṅ wú kẹ̀ ònyíní wú é-sùò àgyìbí wú
 place DET REL man DET PST-buy food DET
 sè kẹ̀gyìfòrì wú Ø bù ìnáásí.
 give child CD 3SG.OBJ COP.be dirty
 ‘The place where the man bought food for the child is
 dirty.’ (Elicited)

Example (49) illustrates a relativization on locatives. *Ñfùṅ* ‘here’ in (49a) is relativized in (49b) and they are covertly coded. It is also possible to relativize temporal adjuncts as shown in (50b).

- (50)a. Ari-ké-gyèkí ñfíṅ kẹ̀ké kùmànúḡ.
 2PL.SUBJ-FUT-meet here day every
 ‘We will meet here every day.’
- b. Kẹ̀ké kùmànúḡ [kẹ̀ àrí-ké-gyèkí ñfíṅ] wú
 day every REL 2PL.SUBJ-FUT-meet here CD
 fù-nyè àsíṅ bùdẹ́ẹ́ sè àrí.
 2SG.SUBJ-get matter sweet give us
 ‘Everyday that we will meet here you give us nice
 message.’ (PYT1)

Possessor

The possessor NP is also accessible to relativization. In Kaakye possessive construction, just like other Kwa languages, the possessed noun always follows the possessor. When the possessor is relativized, the canonical position of the possessor is occupied by a pronoun which agrees with the relativized NP in number and person. Consider (51):

- (51)a. Kẹ̀nyìnsé wú gyòòró é-wù.
 Young boy DET dog PST-die
 ‘The young boy’s dog has died.’

- b. Atrobea é-ṅù kènyìnsé wú [ké mú
 Atrobea PST-see young boy DET REL 3SG.POSS
 gyòòró é-wù wú .
 dog PST-die CD
 ‘Atrobea saw the young boy whose dog died.’ (Elicited)

(52)a. Òyù wú é-ywì ñgyìfòrì wú ikààrí wú.
 thief DET PST-steal children DET dresses DET
 ‘The thief stole the children’s dresses.’

- b. Ñgyìfòrì wú [ké òyù wú é-ywì búò
 children DET REL thief DET PST-steal 3PL.POSS
 ikààrí wú bè-sù.
 dresses CD 3PL.PROG-cry
 ‘The children whose dresses the thief stole are crying.’
 (Elicited)

In (51b) the underlined possessor NP *kènyìnsé* ‘young boy’ is relativized. The original place of the relativized possessor is filled with a singular possessive pronoun *mú* ‘his’ which agrees with the relativized NP *kènyìnsé* ‘in number and person. Similarly, in (51b) *búò* ‘their’ agrees with the relativized NP *ñgyìfòrì wú* ‘children’ since the relativized possessor NP is singular. Relativization of a possessor as in (51) and (52) involves a pronoun retention strategy.

Subject and object of comparison

The subjects and objects of comparison are also relativized in Kaakye. In (53b), the comparee or the subject of comparison is relativized and the relativization strategy used is pronoun retention.

- (53)a. lònḡé wú gyì òlèlè kyúḡ mì lè wú.
 rabbit DET be big than 1SG.POSS PART DET
 ‘The rabbit is bigger than my own.’

- (55)a. Ònyìní kú [ké mù k̀nyìní gyì
 man INDEF REL 3SG.POSS name be.called
 Kóńkóŋ] wú é-dà k̀-kyirà.
 Kóńkóŋ CD PST-live ACT.NOM-sit
 ‘There lived a certain man whose name was Kóńkóŋ.’
- b. Ònyìní kú é-dà k̀-kyirà [ké
 man INDEF PST-live ACT.NOM-sit REL
 mù k̀nyìní gyì Kóńkóŋ] (*wú)
 3SG.POSS name be.called Kóńkóŋ
 ‘There lived a certain man whose name was Kóńkóŋ.’
 (FST2)

In (55a), the RC is adjacent to the head noun and is also embedded in the matrix clause. In (55b), however, the RC is disjoined from the head noun and relocated to the end of the construction. Observe that in the extraposed RC, the clause determiner *wú* does not occur at clause final position. A similar pattern with extraposed RC has been attested in Ewe (Dzameshie, 1995) and in Akan (Saah, 2010). Saah (2010, p.103) commenting on this in Akan, as shown in (56), attributes the absence of what he calls “the clausal determiner” to the fact that extraposed RCs introduce new information. The same holds true for Kaakye.

- (56)a. Ȯbaríma bí [áà ne dín de
 Man INDEF REL 3SG.POSS name be.called
 Nyamekye] nó tená-a ase
 Nyamekye CD sit-PST under
 ‘There lived a man whose name was Nyamekye.’
- b. Ȯbarímá bí tená-a ase [áà ne
 man INDEF sit-PST under REL 3SG.POSS
 dín de Nyamekye.
 name be .called Nyamekye
 ‘There lived a man whose name was Nyamekye’.
 (Saah 2010, p.103)

Summary

This paper has examined RCs in Kaakye. Among other things, it has highlighted the following: First, Kaakye, like most Kwa languages, has strictly postnominal RCs and both the head noun and its referent within the RC are obligatorily expressed. But unlike some Kwa languages, the head nouns obligatorily take a definite determiner.

Second, Kaakye predominantly employs the pronoun retention strategy to indicate the canonical position that corresponds to the head noun in the RC. Where the pronoun retention strategy is used, a resumptive pronoun co-references the head noun in person, number, and animacy to explicitly state the referent of the head noun within the RC.

Third, all NP positions on the Accessibility Hierarchy are accessible to relativization in Kaakye and the strategies employed for extracting the relativized NP differ depending on their grammatical roles. Kaakye, however, contradicts the AH constraints in two ways: Kaakye RC formation strategies do not apply to a continuous segment of the hierarchy and Kaakye obligatorily uses the pronoun retention strategy in subject relativization.

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Endnotes

- * [This paper is based on the first author's PhD Thesis titled 'Aspects of Kaakye grammar' and supervised by the second author. The first author thanks the University of Ghana-Carnegie Corporation of New York under the Next Generation of Academics in Africa (NGAA) project for sponsoring her PhD fieldwork project. A version of this paper was presented at the 48th Annual Conference on Linguistics (ACAL) conference in 2017. We are grateful to the audience for their valuable comments and suggestions. Special thanks to the language consultants: Vincent Oxford Denteh, Moses Danso, Linda Ntumy and Matthew Akuru, who assisted with data verification and interpretation.]
1. This term interestingly, has many alternatives such as Krachi, Kraachi, Kaakyi, Krache and Krakye; but in this study, the term Kaakye is used in the restrictive sense to mean the native speakers of the language and the language itself.
 2. We mark tones in our presentation, however, where data is cited from other sources, we maintain its original presentation.
 3. Snider's (1989) observation suggests that the nasalised vowels /ĩ/, /õ/, /ũ/, /ẽ/, /õ/, and /ã/ exist in North Guan languages.
 4. There are, however, a few exceptions to this rule.
 5. Krachi has a noun class system and a few concordial agreement system. (Korboe, 2001; Abunya, 2018). The number of classes is, however, not exact. Korboe(2001)proposes eleven noun classes using a single set notion of morphological affixes approach, while as Abunya (2018) proposes six noun classes based on singular-plural paring set notion approach.
 6. In the future tense, the vowels in the subject prefixes do not assimilate verbal vowel prefix since the future marker is a CV syllable.
 7. Note that the past tense marker here is é-because of the ATR status of the vowels in the verb stem of the verb gyì 'eat'.
 8. The abbreviations used in this paper are as follows: 1= first person; 2=second person; 3=third person; ACT=Action; CD=Clause determiner; CFM=Clause final marker; CM=Clause marker; CM=Class marker; COMP=Complementizer; COP=Copula; DAT=Dative; DDD= Distal demonstrative determiner; DEF=Definite; DEM=Demonstrative;

DEP=Dependent; DET=Determiner, FUT=Future; HAB= Habitual; IMP=Imperative; INANM=Inanimate; INDEF=Indefinite; LOC=Location;MDA=Mannerdemonstrativeadverb;NAR=Narrative; NEG=Negative; NMLZ=Nominalizer; OBJ=Object; PART=Particle; PDD= Proximal demonstrative determiner; PERF=Perfect; PPD=Proximal predicative determiner; PL=Plural; POSS=Possessive; PRES=Present; PROG=Progressive; PST=Past tense; REL=Relativizer; RP=Relative pronoun; SG=Singular; SM=Subject marker; STAT=Stative; SUBJ=Subject; TOP=Topic marker.

9. We follow Saah (2010) in the use of the term “clause-final determiner” to describe the particle that occurs at the end of an RC. The clause final determiner does not occur in extraposed RC. This is discussed under Extraposed RCs.
10. The complimentizer *ké* usually appears with manipulation and modality verbs. There are also a limited number of PCU verbs that can occur with it: such as the utterance verb *gyiri wá* ‘tell’. When it appears with PCU verbs, it marks an order. One peculiar feature of this complementizer is that its choice is not only relevant to the particular matrix verb but also relevant to the tense, aspectual, mood and negation relations inflected on matrix verb.
11. As it will be discussed under Extraposed RCs, the clause determiner *wó* does not occur at clause final position
12. DOM is a variation in the encoding of direct objects, whereby only a subset of direct objects receives overt coding (DOM) depending upon semantic or pragmatic features of the direct object, such as animacy, definiteness, and specificity (Iemmolo, 2012, p.1).
13. Iemmolo (2014, p.67) points out that “even though, in many languages, animacy is clearly the leading parameter in determining the presence versus absence of DOM, within the class of human or animate referents that may receive DOM, animacy interacts with other parameters such as definiteness and gender”. In relation to gender, he shows that in Russian, only singular masculine animate direct objects receive accusative marking.