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A first look at Krachi clausal determiners

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5.1 Introduction

IN HIS DOCTORAL DISSERTATION, Schuh (1972a) observed that certain kinds of clauses in Ngizim, a West Chadic language of the Bade group, can occur with determiners. For example, the bracketed temporal clause in (1a) has the definite determiner *tənu* on the right edge:

(1) a. [Jà γka aci **tənu**], jà ndem aci   (*when* Clause)
        'When we saw him, we greeted him.'

                    (Adapted from Schuh 1972a: 333, ex. 32)

b. [Daa káa bii-naa gəši-k bədlamu **nən**]…   (Conditional)
'If you were to get some hyena heart…'

(Adapted from Schuh 1972a: 346, ex. 74)

c. [Akuu kwá ji-n-aakun **nən**]…   (*after* Clause)
'After you leave…'

(Adapted from Schuh 1972a: 356, ex. 118)

In contrast, the conditional and *after* clauses in (1)b-c have *nən* on the right edge. Schuh suggests, "…that *nən* is an indefinite determiner, which may appear at the end of adverbs by virtue of their being noun phrases" (Schuh, 1972a: 332).[1] The occurrence of a determiner-like element with a CP, a clausal determiner (CD), is not limited to Ngizim however.

In later work, Schuh shows that in Miya, a West Chadic language of the North Bauchi group, there are also clauses that occur with determiner-like elements:

(2) a. Dà   fárkoo jɪfana kwáa náya wún gyàɓiya **ká**…
        at.first   man when see girl young PRM

'To begin, when a man sees a woman…'

(Adapted from Schuh 1998: 377)

b. …tə tán s-áa   àalow-za **ká**
    he   if TOT-ɪpf love-her PRM
'…if he loves her…'   (Schuh, 1998: 377)

c. Fàa   kwáa   zàra-tlən **ká**…
    you.(m.s) when/if call-them PRM
'If you call them…'   (Schuh, 1998: 372)

As the examples in (2) attest, certain temporal and conditional clauses can have the "Previous Reference Marker" (PRM) on the right periphery. Concerning (2c), Schuh remarks that, "*Kwáa* clauses always terminate with *ká*, the morpheme used in noun phrases to indicate previous reference" (Schuh, 1998: 372).

In this paper, we build on Schuh's observations in Chadic by turning to Niger-Congo and presenting a preliminary description of clausal determiners in Krachi (also spelled "Kaakye," "Kaakyi," "Kaci," "Krache," and "Krakye"), an under-documented and endangered Volta-Comoe language (J. Greenberg, 1963; Westermann & Bryan, 1952) of the North Guang branch of the

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[1] See Schuh (1972a) for detailed discussion of the conditioning of the definite versus indefinite markers in these clauses.

Tano group of Kwa languages. Section 5.2 presents a brief introduction to the language. A description of determiners and clausal determiners in the language follows in Section 5.3. Section 5.4 briefly discusses and compares clausal determiners in the related Kwa language Gã with Krachi. Section 5.5 concludes.

5.2   Background on Krachi

Krachi is spoken in the Krachi West and Krachi East districts of the Volta region in central eastern Ghana. The Krachi speaking area centers around the commercial center Kete Krachi, situated on Lake Volta. Krachi is a member of the Guang subgroup of the Kwa languages. Within Guang, Snider (1998) places Krachi in the River group of the North Guang languages. Adonae (2005), however, classifies Krachi as a Central Guang language. According to Adonae, there are four dialects of Krachi: Central (spoken in Kete Krachi), West (spoken in the Kajaji, Nkomi and Odefour communities of the Sene district in the Brong Ahafo region), East (spoken in non-exclusively Krachi-speaking communities such as Dambai, Ayiremo, Kparekpare, and Tokoroano along the Oti River east of Kete Krachi), and North (spoken in the northern Volta region by a number of smaller communities along the main Krachi–Tamale road that borders the Nchumburung communities). These four Krachi varieties are mutually intelligible, but dialectal differences are easily noticed by linguistically untrained native speakers. The data from this paper are drawn exclusively from the Central Krachi dialect.[2]

Syntactically, Krachi has basic SVO word order:

(3)   ɔ-kyɪ   wʊ ɛ-mɔ   bwatɛ   wʊ
      CL-woman the PST-kill chicken the

      'The woman slaughtered the chicken.'

Like other Guang (especially North Guang) languages, Krachi has both noun classes[3] and a concordial agreement system. There is some disagreement as

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[2]The Krachi data in this article are presented in the official Krachi orthography developed by the Ghana Institute for Linguistics, Literacy & Bible Translation (Dundaa, 2007). Because the orthography does not mark Krachi's two surface level tones (High and Low; cf. Adonae 2005; Snider 1990), we have omitted tone marking from our representations. The following abbreviations are used in the glosses of Krachi examples in this paper: CD – clausal determiner; CL – class marker; COMP – complementizer; FOC – focus; FUT – future; NEG – negative; POSS – possessive; PST – past; SG – singular; SPEC – specificity marker.

[3]Krachi's noun class system differentiates it from other Tano language, like Akan, which has only the remnants of a noun class system (Osam, 1994).

to the overall number of noun classes in the language. Dundaa (n.d.), for example, claims the existence of eight distinct classes, while Korboe (2002) analyzes Krachi as having eleven (see Korboe 2002 and Snider 1988 for details on the language's noun class system). As illustrated below, the noun class of a particular noun can be determined by the class prefix on the noun, which may be phonetically null in certain cases.

(4)   a. ɔ-kyɪ 'woman'
        b. a-kyɪ 'women'
        c. kɪ-kpʊreki 'vulture'
        d. a-kpʊreki 'vultures'
        e. ku-gyo 'yam'
        f. i-gyo 'yams'
        g. Ø-bwatɛ 'chicken'
        h. m-bwatɛ 'chickens'

5.3   Krachi determiners and clausal determiners

THE DEFINITE ARTICLE IN KRACHI (*wʊ*) occurs postnominally following adjectives and numerals and does not inflect for noun class (i.e., number + gender). As (5) shows, the article remains the same whether it occurs with a singular or plural noun:

(5)   a. kɛ-gyɪfɛ bɪbɪw ɔkʊnkʊ wʊ
           CL-cloth black one   the

           'the one black cloth'   (Adapted from Korboe (2002), ex. 32b)
        b. Anyiŋkpɪsɛ kudu wʊ bɛ-ba
           people   ten   the PST-come
           'The ten people came.'   (Adapted from Korboe (2002), ex. 11c)

However, the distribution of the definite article is not the same as in English. Even common nouns without the article can be interpreted as definite, although this seems to be a property more of subjects than objects:

(6)   a. Gyoro gyi mʊ-lɛ
           dog   be 3SG-POSS

           'The dog is his/hers.'   (Adapted from Korboe (2002), ex. 37f)

b. A–kyı   asa   bɛ fũ
   CL-woman three be married

‘The three women are married.’

<div align="right">(Adapted from Korboe (2002), ex. 16a)</div>

Depending on its phonetic environment, the definite determiner has a number of realizations ([o, ɔ, u, wo, wu, wɔ] and possibly others). At this stage of our research, it is unclear whether the definite determiner can be dropped or is just difficult to discern at times, given that it can be very challenging to distinguish it from a preceding final vowel.

  One environment in which we find clausal determiners in Krachi is the relative clause. Clausal determiners obligatorily appear at the right edges of relative clauses, which are head-initial in Krachi:

(7) a. ɔ-kyı   wʊ [kɛ   ɔ-dɛ]   *(**wʊ**)
        CL-woman the COMP 3SG-sleep CD

     ‘the woman who slept’

   b. ɔ-kyı   kʊ   [kɛ   ɔ-kya]   *(**wʊ**)
      CL-woman SPECIF COMP PST–dance CD

     ‘a certain woman who danced’

   c. kyuŋ   wʊ kɛ   fɛ-dwɛnɛ [fɛɛ   Kwaku ɛ-ta]
      guinea.fowl the COMP 2SG-think COMP Kwaku PST–pick.up
      *(**wʊ**)
      CD

     ‘the guinea fowl that you think that Kwaku picked up’

Templatically, Krachi relative clauses take the following form.

(8) [NP DET [CP *kɛ* [TP S V O] CD]

That is, the clausal determiner occurs phrase-finally in relative clauses. As (7b) shows, the position of the (non-clausal) determiner is immediately following the head noun, the position where the specific indefinite determiner (*kʊ*), which is non-homophonous with the CD, also occurs.

  A clausal determiner optionally appears at the right edge of certain matrix *wh-* questions.

(9) a. Nɛ   yı   fɛ   wa? (Neutral *wh-* Question)
        what FOC 2SG do

     ‘What are you doing?’

    b. Nɛ   yɪ   fɛ   wa **wʊ**!? (Emphatic *wh-* Question)
       what FOC 2SG do CD

       'What (the hell) are you doing!?'

(10) a. Nɛ   yɪ   fɛ   kɛrɛ? (Neutral *wh-* Question)
       what FOC 2SG read

       'What are you reading?'

    b. Nɛ   yɪ   fɛ   kɛrɛ **wʊ**!? (Emphatic *wh-* Question)
       what FOC 2SG read CD

       'What (the hell) are you reading!?

As the translations show, the use of the clausal determiner with a *wh-* question indicates speaker disapproval or that the speaker has a negative attitude towards what is happening (consultant remark: "The speaker is angry"). This use of the clausal determiner is also found in embedded questions, which have the form of relative clauses. This is illustrated below in (11).

(11) Mɪ n-nyi   yo/atɔ kɛ   fɛ   kɛrɛ **wʊ**!
     1SG NEG-know thing COMP 2SG read CD

     'I don't know what (the hell) you're reading!'

Although the presence of the CD does seem to add an emphatic flavor to some *wh-* questions, we have also found cases where the presence or absence of the CD in *wh-* constructions does not make an interpretive difference.

(12) a. Nsɛ yɪ ɔ-kya   (**wʊ**)?
       who FOC PST-dance CD

       'Who danced?'

    b. Mɪ e-bisɛ fɛɛ nsɛ yɪ ɔ-ta   kɪtɛ (**wʊ**)
       1SG PST-ask COMP who FOC PST-pick.up feather CD

       'I asked who picked up a feather.'

An interesting co-occurrence restriction on clausal determiners is found in embedded *wh-* in-situ constructions. Krachi allows for *wh*-in-situ (and partial *wh-* movement) in embedded clauses (see Torrence and Kandybowicz 2015 for a detailed description of *wh-* questions in Krachi).

(13) Mɪ e-bisɛ fɛɛ   Ama ɛ-tʊŋ   nɛ
     1SG PST-ask COMP Ama PST-cut what

     'I asked what Ama cut.'

However, it is not possible to use the clausal determiner if the *wh*-item appears in-situ. Compare (14) below, where the clausal determiner is blocked from co-occurring with an in-situ embedded *wh*-item, with (12b), where it may optionally appear in the embedded clause accompanying a focused *wh*-element.

(14)   *Mɪ e-bisɛ fɛɛ Ama ɛ-tʊŋ nɛ **wʊ**
         1SG PST-ask COMP Ama PST-cut what CD

        (Intended: 'I asked what Ama cut.')

Non-*wh*- focused constituents can also co-occur with an optional clausal determiner.

(15)   Kweku yɪ ɔ-kya   (**wʊ**)
        Kweku FOC PST-dance CD

        'It's KWEKU who danced.'

As with the focused *wh*-questions (e.g. (12)), it is unclear what the semantic contribution of the CD is in this case.

    The clausal determiner also appears in a number of embedded clausal contexts in Krachi. CDs optionally appear with sentential subjects, which are canonically factive.

(16)   a. [Kɛ Kwadu ɛ-dɛ   Kofi **wʊ**] bo ŋwaŋwa
            COMP Kwadu PST-beat Kofi CD   be surprising

            'It is surprising that Kwadu beat Kofi.'

        b. [Kɛ Ama ɛ-watɪ   kapare wʊ brɪŋ   **wʊ**] ɛ-ha   wɛ
            COMP Ama PST-pound fufu   the quickly CD   PST-disturb 2SG

            'The fact that Ama pounded the fufu quickly disturbed you.'

    The clausal determiner also appears in factive complement clauses. In contrast with their occurrence in subject clauses, the CD is obligatory in this environment, as the following data show.

(17)   a. Mɪ kyɪrɪ [kɛ mɛ dɛ *(**wʊ**)]
            1SG hate COMP 1SG sleep CD

            'I hate (the fact that) I slept.'

        b. Yɪ bwarɛ [fɛɛ Yaw ɛ-ta   Kofi *(**wʊ**)]
            it good COMP Yaw PST-pick.up Kofi CD

            'It is good that Yaw picked up Kofi.'

Note that determiners do not form constituents with proper names in Krachi, as demonstrated below.

(18) * Yaw ɛ-ta   Kofi wʊ
       Yaw PST-pick.up Kofi the

       (Intended: 'Yaw picked up Kofi.')

Thus, the right edge determiner in (17b) cannot be associated with the proper name *Kofi*. It must take scope over the entire subordinate clause. The clausal determiner occurs obligatorily on the right edge of a type factive/manner clause that involves relativization of a nominalized form of the verb.

(19) Yɪ n-tɪrɪ   fʊ [ke-bi   wʊ [kɛ Yaw ɛ-bi   Kofi kai
       it NEG-bother 2SG NOM-beat the COMP Yaw PST-beat Kofi harshly
       *(**wʊ**)]]
       CD

       'The fact that Yaw beat Kofi harshly does not bother you.'
       'The way that Yaw beat Kofi harshly does not bother you.'

At least in some cases, the clausal determiner occurs in temporal clauses, although the precise conditions that license its occurrence are presently unclear.

(20) Kɛ   Gyaruusi e-ŋu   Yesu **wʊ**…
       COMP Jairus   PST-see Jesus CD

       'when Jairus saw Jesus…'   (Mark 5:22, GILLBT 2011)

The clausal determiner occurs on the left edge of the protasis of a simple conditional clause, as shown below.

(21) a. [Sɛ ɔ-kyɪ   wʊ mɛ-mɔ bwatɛ   wʊ **wʊ**] Ama ke-yo
           COMP CL-woman the ?-kill   chicken the CD   Ama FUT-go

           'If the woman kills the chicken, Ama will leave.'

      b. [Sɛ   Kofi mɛ-kya **wʊ**] Ama ke-yo
           COMP Kofi ?-dance CD   Ama FUT-go

           'If Kofi dances, Ama will leave.'

We have shown that a subset of Krachi clauses are somewhat nominal in that they occur with stereotypical nominal elements like clausal determiners. Krachi clauses with the clausal determiner seem to be full CPs capable of hosting focused phrases in their left peripheries. In (22) below, the verb has been predicate clefted inside of the clause with the CD.

(22) [Kɛ [kɛ-watɪ] ji Ama ɛ-watɪ   kaparɛ wʊ brɪŋ   **wʊ**]
      COMP NOM-pound FOC Ama PST-pound fufu   the quickly CD
      ɛ-ha   wɛ
      PST-disturb 2SG

      'That Ama POUNDED the fufu quickly disturbed you.'

There is also an exclamative construction which may involve a clausal determiner, but further work is required to firmly establish this, given its complex phonological/phonetic realization. This is shown below in (23).[4]

(23)   a. Ntɛ Kofi dɪɛ   kya **wʊ**
           PST Kofi always dance CD

           'Kofi used to dance!'

       b. Kɛkyɪsɛ wʊ bɔda   **ŋwʊʊ**
           woman the beautiful CD?

           'The lady is very beautiful!'

5.4   Brief comparison to Gã

BEYOND KRACHI, CLAUSAL DETERMINERS ARE REPORTED in a number of Kwa languages (Kropp Dakubu, 1992) and New World Atlantic creoles (Lefebvre, 2015). Korsah (2017) reports on clausal determiners in Gã, a closely related Kwa language, where the definite determiner is *lɛ* (24a). Like Krachi (see (7)), headed relative clauses in the language obligatorily involve a right edge clausal determiner (24b).[5]

(24)   a. tsó lɛ́
           tree DEF

           'the tree'   (Korsah 2017: 153, ex. 4a)

       b. tsó (lɛ́) ní Taki kwɔ́ *(lɛ́)
           tree DEF REL Taki climb CD

           'the tree that Taki climbed'   (Korsah 2017: 153, ex. 4b)

In Gã matrix focus clauses, there is an optional CD.

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[4]The kind of exclamative sentence in (23b) is pronounced at an audibly higher pitch register than ordinary declarative sentences in the language.

[5]Korsah (2017) does not have examples of relative clauses with indefinite heads (e.g., *a tree that Taki climbed*).

(25) Taki ni tsɛ́ Momo (lɛ́)
Taki FOC call Momo CD

'Taki called Momo (as expected).' (Korsah 2017: 155, ex. 9)

In this way as well, Gã patterns like Krachi. Recall that the CD is optional in Krachi when non-*wh*-constituents are focused (15). Gã is also like Krachi in allowing in-situ *wh*- and movement when a *wh*-item originates in an embedded clause. Like Krachi too, when the in-situ option is chosen, the clausal determiner is impossible.

(26) Osa bí [akɛ Taki tsɛ namɔ (*lɛ)]
Osa ask COMP Taki call who CD

'Osa asked who Taki called.' (Korsah 2017: 156, ex. 11b)

Unlike Krachi, however, when a *wh*-item from an embedded clause is extracted, the clausal determiner is obligatory.

(27) Námɔ [ni Osa le [ákɛ́ Taki he] *(lɛ́)]
what FOC Osa know COMP Taki buy CD

'What does Osa know that Taki bought?'

(Korsah 2017: 156, ex. 14b)

Gã clausal determiners occur with CP subjects, just as in Krachi (16). And just like Krachi, the CD is obligatory in this environment.

(28) [Ákɛ́ ámlaló lɛ́ tsé tóó nɔ́ *(lɛ́)] feé maŋ-bíí lɛ́
COMP government DEF tear tax TOP CD do country-people DEF
mííshɛɛ
happiness

'That the government reduced taxes made the people happy.' (Korsah (2017: 160), ex. 23)

The clausal determiner co-occurs optionally in Gã matrix focus clauses, which may lend a flavor of expectedness. This is illustrated below. This interpretational effect is not something we have observed in Krachi.

(29) Taki ni tsɛ́ Momo (lɛ́)
Taki FOC call Momo CD

'TAKI called Momo (as expected).' (Korsah 2017: 155, ex. 9)

Korsah (2017) also shows that like Krachi (21) clausal determiners occur in the antecedents of conditional clauses.

(30)   Kɛ́(ɪ)   o-bá   *(lɛ́), m-á-yá
       COND 2SG-come CD   1SG-FUT-go

       'If you come, I will go.'   (Korsah 2017: 161, ex. 24b)

The data from Gã are useful because of their similarity to the Krachi pattern. This suggests that these systems may ultimately be amenable to a unified analysis, although the data raise a number of descriptive and analytical questions.

5.5   Conclusion

IN THIS FIRST DESCRIPTION of clausal determiners in Krachi, we have shown that they occur in a number of A′ contexts, such as relativization, focus, and conditional clauses. In addition, we have briefly compared Krachi to Gã and demonstrated that there seems to be quite a lot of overlap in the distribution of CDs in the two languages. At the same time, there are a number of outstanding issues with regard to the syntax and semantics of CDs both within Krachi and in comparison to other languages. As the present work on Krachi loops back to the original observations in Schuh (1972a), we once again find ourselves in the position of learning from our beloved former teacher and mentor.

Acknowledgments