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A note on the typology of head-internal relativization

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1. INTRODUCTION

Languages of the world show various relativization strategies. Descriptively speaking, depending on structural/linear positions in which a relativized head noun appears, relative clauses can be classified into PRENOMINAL, POSTNOMINAL, and HEAD-INTERNAL types (although a clear distinction between ‘structural’ and ‘linear’ positions should be made in order to obtain a more significant typology. See Bodomo and Hiraiwa in press for discussion).¹ Creissels (2000) states that Head-Internal Relative Clauses (HIRCs) are generally hard to come by in the African continent. In fact, according to Kuteva and Comrie (2005), HIRCs were not found in their 54 sample African languages. (1) is an example of a prenominal relative clause from Koyra and (2) is an example of a postnominal relative clause from Swahili (both examples are cited from Kuteva and Comrie 2005).

- (1) *zine hand- a geri hay’uttosso*
yesterday go PERF people-NOM die-POL.PERF
‘The people who went yesterday died.’
(Hayward 1982:255, Koyra)

- (2) *m- toto amba- ye ni- li- mw- ona*
CL1 child REL YE I PAST OBJ see
‘the child whom I saw’
(Kuteva and Comrie 2005:216, Swahili)

Does it mean that the absence of HIRCs is a significant feature shared by all the African languages? In this paper, I demonstrate that while it is true that a head-internal strategy is quite rare in African languages, it is not the case that its absence is one of the typological features of African languages. However, to the best of my knowledge, HIRCs are only observed in some Gur languages (Niger-Congo family) in the African continent. This paper presents first-hand data on HIRCs in Gur languages based on my fieldwork and demonstrates that HIRCs do exist in African languages. Another (tentative) proposal that I make in this paper is a hypothesis that more than one parameter is involved in licensing HIRCs.

¹ I am very grateful to my language consultants/collaborators: George Akanlig-Pare (Buli), Sam Atintono (Gurene), Adams Bodomo (Dagaare), Mary Bodomo (Dagaare), Komlan Essizewa (Kabiyé), Hudu Fusheini (Dagbani), and Izedeem Seidu (Dagbani).

2. A VIEW FROM GUR LANGUAGES

As far as I know from my own fieldwork over the past years as well as from the literature, at least five Gur languages allow HIRCs as well as their ex-situ counterparts (postnominal relative clauses, in these languages). These include Buli (Hiraiwa 2005), Kabiyé (Komlan Essizewa p.c.), Mooré (Peterson 1974, Tellier 1989), Dagbani (Wilson 1971, Peterson 1974, Olawsky 1999, Hudu Fusheini, p.c., Izedeen Seidu p.c.), and Gurene (Samuel Atintono p.c.).²

- (3) *Amoak nya [Atim ali sua naa-buui la]*
 Amoak saw Atim C own cow-REL DEM
 ‘Amoak saw the cow which Atim owned.’
 (George Akanlig-Pare, Buli)

- (4) *[ma-na ha n-ga tede yɔ] kɛ-goma*
 1SG-saw dog N-CL yesterday D 3SG-came
 ‘The dog I saw yesterday came.’
 (Komlan Essizewa p.c., Kabiyé)

- (5) *[fo se yaa daw-ninga zaame wa] kula me*
 2SG C saw man-REL yesterday DEM went.home PART
 ‘The man who you saw yesterday went home.’
 (Peterson 1974, Mooré)

- (6) *[n nə puhi saan-so la] tɕaŋya*
 1SG C greeted stranger-REL D has.gone
 ‘The stranger who I greeted has gone.’
 (Peterson 1974, Dagbani)

- (7) *[Atia n d’a bua-seka da’a zaam la] bɔi mɛ*
 Atia C buy goat-REL market yesterday D lost PART
 ‘The goat that Atia bought at the market yesterday got lost.’
 (Atintono p.c., Gurene)

They also allow Head-External Relative Clauses (HERCs). HERCs in these languages take the form of a postnominal relative clause.

² In Hiraiwa (2005, 2008), I reported that Gurene disallows HIRCs based on limited data collected in 2003. However, it has recently turned out that HIRCs are grammatical.

- (8) *Amoak nya [naa-buui ati Atim sua la]*
 Amoak saw cow-REL C Atim own DEM
 ‘Amoak saw the cow which Atim owned.’
 (George Akanlig-Pare, Buli)
- (9) *[ha n-ga ma-na tede yɔ] kɛ-goma*
 dog N-CL 1SG-saw yesterday D 3SG-came
 ‘The dog I saw yesterday came.’
 (Komlan Essizewa p.c., Kabiyé)
- (10) *[daw-ninga fo se yaa zaame wa] kula me*
 man-REL 2SG C saw yesterday DEM went.home PART
 ‘The man who you saw yesterday went home.’
 (Peterson 1974, Mooré)
- (11) *[saan-so n nə puhi la] tfanya*
 stranger-REL 1SG C greeted D has.gone
 ‘The stranger who I greeted has gone.’
 (Peterson 1974, Dagbani)
- (12) *[bua-seka ti Atia da’ da’a zaam la] bɔi mɛ*
 goat-REL C buy bought market yesterday D lost PART
 ‘The goat that Atia bought at the market yesterday got lost.’
 (Atintono p.c., Gurene)

However, not all Gur languages allow HIRCs. Others (Dagaare, Sisaala-Pasaale, Kɔnni) seem to lack HIRCs.³

- (13) *kuwori ha bi na [biŋ hu u aa kyɛ]*
 chief still NEG see faces D he IMP want
 ‘The chief still didn’t see the faces he was wanting.’
 (McGill et al. 1999:135, Sisaala-Pasaale)
- (14) *naa yi [vɔri-ka fi yala]*
 pick give person-D 2SG want
 ‘Give it to the person you want.’
 (Cahill 1999, Kɔnni)

³ I do not have first-hand data for Sisaala-Pasaale and Kɔnni. Dagaare in principle disallows HIRCs (although a more extensive study of dialectal variation is necessary).

- (15) *n da sɔre la [a gane na Dakoraa nang ngmaa]*
 1SG PAST read F D book DEM Dakoraa C wrote
 ‘I read the book that Dakoraa wrote.’
 (Bodomo and Hiraiwa in press, Dagaare)

The existence of HIRCs in African languages is by itself significant for the above reason: at least, HIRCs are actually present on the African Continent.

However, it also offers quite significant insights for typology and linguistic universals, which are not available from other languages outside Africa. Various linguists have proposed different parameters for HIRCs (see Basilico 1996 for discussions). Langendoen (1977), Kuroda (1974-77/1992) and Cole (1987) put forth the famous word order generalization that HIRCs are restricted to SOV languages (with a null pronoun) (cf. also Kayne 1994).

Watanabe (1992) argued that Wh-in-situ is the defining parameter. This hypothesis is quite natural given that relativization and Wh-constructions are known to have much in common cross-linguistically (they are known as A-bar phenomena in generative frameworks. See Chomsky 1981). However, this proposed parameter is challenged by Gur languages. While those Gur languages with HIRCs are at least optional Wh-in-situ languages, Kɔnni is also an optional Wh-in-situ language, but still disallows HIRCs. So Wh-in-situ alone should not be the only parameter involved (although none of these Gur languages are strict Wh-in-situ languages).

My detailed fieldwork research of HIRCs in several Gur languages has also demonstrated that they show HIRCs even though they are SVO languages without pro-drop (see also Tellier 1989, Gil 2000 for pertinent observations). Watanabe (2004) proposed yet another generalization that HIRCs are limited to languages with a so-called indeterminate system. However, this generalization does not apply to those Gur languages either. None of the Gur languages seem to have what he calls an indeterminate system in which Wh-phrases and indefinite pronouns show systematic morphological similarity.

3. NEW GENERALIZATIONS

One key observation of significance for us, repeated here, is that not every Gur language allows HIRCs. Those Gur languages in my sample that allow HIRCs include Buli, Kabiyé, Mooré, Dagbani, and Gurene. In HIRCs, the head remains in-situ, while the head can be also dislocated to the left, forming postnominal relative clauses. On the other hand, those Gur languages that do not allow HIRCs in my sample include Sisaala-Pasaale, Kɔnni, and Dagaare. In these languages, the relativized head obligatorily moves to the left periphery.

A close comparison between these two groups of languages reveals interesting descriptive generalizations that (i) those Gur languages with HIRCs show a determiner element at the right edge of the relative clause (see (16)), whereas (ii) those Gur languages without HIRCs show a determiner element (D) adjacent to

the head noun at the left edge (see (18)). Note that the former group of languages also places a determiner at the right edge in HERCs (see (17)) (The schematic structures in (16)–(18) are for relative clauses whose head is an object).

(16)	[[... SUBJ V OBJ ...] D] (HIRC)	(Buli, Kabiyé, Mooré, Dagbani, Gurene)
(17)	[OBJ [... SUBJ V <i>e</i> ...] D] (HERC)	(Buli, Kabiyé, Mooré, Dagbani, Gurene)
(18) i.	[OBJ D [... SUBJ V <i>e</i> ...]]	(Sisaala-Pasaale)
ii.	[OBJ-D [... SUBJ V <i>e</i> ...]]	(Kɔnni)
iii.	[D OBJ [... SUBJ V <i>e</i> ...]]	(Dagaare)
iv.	[D [... SUBJ V OBJ ...]]	(unattested cross-linguistically)

A highly interesting theoretical question, then, is why the position of D correlates with the (un)availability of HIRCs in these Gur languages. I will not go into any technical details here (see Hiraiwa 2008 for a theoretical proposal), but the generalization seems to be the following: those Gur languages that allow HIRCs and HERCs place a determiner at the right edge of the relative clause and allow Wh-in-situ. In contrast, those Gur languages that disallow HIRCs place a determiner adjacent to their fronted relativized head noun instead of placing it at the right periphery of the relative clause. It should be noted that Kɔnni is an optional Wh-in-situ language while Sisaala-Pasaale and Dagaare are obligatory Wh-fronting languages.

Given the SOV word order of all of these Gur languages, Wh-fronting is understood to be moving a Wh-phrase to the left of a complementizer at the left periphery. Similarly, the ‘NP D’ word order in noun phrases is a result of moving an NP to the left of the determiner. A picture that emerges is that the availability of HIRCs among Gur languages is determined by more than one factor (i.e. parameter). I propose that there are two key parameters playing roles here.

- (19) (a) C requires/does not require a Wh-phrase to fill its specifier in questions.
 (b) D requires/does not require a noun phrase to fill its specifier.

First, in order for a language to license HIRCs, the complementizer must allow its specifier to be unfilled by an overt Wh-phrase. In other words, a language must at least allow Wh-in-situ (see Watanabe’s 1992 generalization). Second, the determiner must allow its specifier to be filled by an element other than a noun phrase, namely a clause (CP) (this strategy is also used in so-called factive constructions; see Culy 1990, Collins 1994). If we assume that a relativized head noun has something in common with a Wh-phrase, the first parameter allows the relativized head to remain in-situ. The second parameter determines whether the

external determiner in relative clauses requires a noun phrase or a clause in its specifier. If the former, a relativized head noun must move out of its original position. If the latter, it remains in-situ and instead the whole clause moves, giving rise to ‘CP D’ order in (16).

4. TOWARDS A UNIVERSAL THEORY

Gur languages bring further consequences for the typology of HIRCs outside Africa. In Hiraiwa (2005, 2008), I have observed that HIRCs come in two varieties cross-linguistically: the determiner-type (16) (e.g. Navajo, Lakhota, Miskitu, Diegueño, Gur languages, etc.) and the nominalization-type (20) (e.g. Japanese, Dogrib, Quechua, etc.) (see Gorbet 1976 for Diegueño, Platero 1974 and Barrs et al. 1991 for Navajo, Williamson 1987 for Lakhota, Lefebvre and Muysken 1988 for Quechua, Hale and Salamanca n.d. for Miskitu, and Saxon 2000 for Dogrib data). HIRCs in Gur belong to the former, as shown in (16). In this type, the external determiner is obligatory in HIRCs. The latter, on the other hand, uses nominalization instead of determiners. In fact, the Kuroda-Langendo-Cole’s SOV word order generalization seems to hold only in the latter type of HIRCs. In other words, HIRCs of the nominalization type are only found in SOV or order-free languages, while HIRCs of the determiner-type are found both in SOV and SVO languages.

(20)	[[... SUBJ OBJ ... V] Nml]	(Japanese, Dogrib, Quechua)
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An example from Japanese is illustrated below. Instead of being marked by a determiner, the HIRC is marked by the nominalizer/complementizer at the right edge of the relative clause.

- (21) *Ken-wa [teeburu-no ue-ni ringo-ga oiteatta no]-o tabeta*
 Ken-TOP table-GEN on-LOC apple-NOM had.been.put C/NML ate
 ‘Ken ate the apple that had been on the table.’
 (Japanese)

Thus, HIRCs in Gur not only show the existence of HIRCs in African languages but also lead us to a new typology of HIRCs and refined universals.

Finally, turning back to the parameters involved in licensing HIRCs, an interesting observation to make is that the languages of the nominalization-type are mostly languages with SOV word order and Wh-in-situ. More importantly, a few set of “exceptional” languages that have HIRCs and obligatory Wh-fronting (Imbabura Quechua and Mohawk) belong to this type and are missing in the determiner-type category.

- (22) [*Wambra wagra-ta randi-shka*] *ali wagra-mi*
 boy cow-ACC bought-NML good cow-VALIDATOR
 ‘The cow that the boy bought is a good cow.’
 (Cole and Hermon 1994, Imbabura Quechua)

My suggestion for the reason for this split between the two types is as follows. SOV languages tend to lack a full-fledged determiner system in contrast with SVO languages. Thus the second parameter (19b) is either irrelevant for them or the specifier is not active (because the specifier and the complement are not linearly distinguishable in SOV languages). What is more important is the first parameter (19a). I propose that clausal nominalization in relativization deprives C of the ability to trigger Wh-fronting. If so, a relativized head noun does not have to come in the specifier of CP. Thus, an HIRC emerges as an option. The situation in Mohawk is more complicated. Mohawk allows discontinuous Wh-questions in which a Wh-phrase appears in the fronted position and its associated noun phrase remains in-situ. As Baker (1996) suggests, this can explain why HIRCs are also possible in this otherwise obligatory Wh-fronting language. I should also note that the language makes robust use of ‘zero’-nominalization despite a lack of morphological indicator of nominalization (see Baker 1996 for detailed discussions).

5. CONCLUSION

In this paper, I have demonstrated that the head-internal relativization strategy is indeed attested on the African Continent. At the current understanding and description of African languages, to the best of my knowledge, HIRCs are only attested in some Gur languages among African languages. Based on the data from the Gur languages, I have proposed that there are two types of HIRCs in the languages of the world: the determiner-type and the nominalization-type. I have further suggested that two parameters are involved licensing HIRCs. The first is a parameter for Wh-fronting/Wh-in-situ and the second is a parameter for a determiner’s ability to take a clause as complement.

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