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Syntactic Anchoring in Hausa and Coptic *wh*-constructions¹

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0. Introduction

This study represents the first systematic comparison of *wh*-constructions in the Afroasiatic languages Hausa (Chadic) and Coptic (Ancient Egyptian 400-1000AD). Since the 1970s, extensive research has been carried out on the syntactic similarities between such diverse sentence types as *wh*-questions, focus constructions and relative clauses. This 'natural class' of sentences is characterised by the presence of an open position or variable, which is assigned an interpretation by a scope-taking expression, and is therefore labelled operator-variable constructions. In the languages we are looking at, membership of this class is signalled by specialised inflectional morphology. We will refer to this specialised morphology as 'relative aspect' in the sense of Schuh (1985).² In this paper we will mainly be concerned with the syntactic conditioning underlying the absence or presence of a relative aspect form in a given interrogative context.

1. Descriptive facts

In this section we will outline the descriptive facts surrounding relative aspects in Hausa and Coptic Egyptian. We will establish that both languages not only make productive use of the same type of specialised inflectional morphology, but also show consistent distributional behaviour with respect to the syntactic conditioning of relative aspect marking.

1.1. Introducing relative aspects

Hausa and Coptic Egyptian can both be described as discourse-configurational languages, where topic and focus prominence involves a departure from the canonical SVO word order, illustrated in (1a-b) below. The data throughout this

¹ We would like to thank Lisa Lai-Shen Cheng, Phil Jaggar, Jamal Ouhalla and Johan Rooryck for helpful comments and suggestions. Any remaining errors are our own.

² The use of special inflection in interrogatives is by no means restricted to Afroasiatic languages. See Haik (1990) for a recent overview.

section will be presented in pairs, where the a-sentence is from Hausa and the b-sentence from Coptic, indicated by superscript H and C, respectively.

- (1) a. *yârā* **sun** *tâfi kâsuwâ*
 children 3pl.PERF go market
 ‘The children went to market.’^H
- b. **a** *te.f-so:ne* *o:l* *n-ne.f-kees*
 PERF DD:sf.3sm-sister gather DO.marker-DD:pl.3sm-bones
 ‘His (Apa Mena’s) sister gathered his bones’ (Mena, 4a:1-2)^C

In both languages, the inflectional element is morphologically independent from the verb. In pragmatically neutral declarative clauses (1), the inflection word (indicated in boldface) assumes a neutral form. In the context of relative embedding, however, a specialised form of inflection is found (whence the traditional term ‘relative aspect’):³

- (2) a. *âkwâtîn* [_{CP} *dâ* **sukâ** *sakâ kâyâ à ciki(nsà)*]
 box.DD C⁰ 3pl.REL-PERF put things at inside(of.3sm)
 ‘the box that they put the things in’^H
- b. *pe-ma* [_{CP} \emptyset **nt-a-k-k^hnt-f** *nhet-f*]
 DD:sm-place C⁰ REL-PERF-2sm-find-3sm inside-3sm
 ‘the place where you found it (the boat)’ (Ac. A&P 204:145-6)^C

However, relative aspects are not simply subordinate inflectional forms that appear in relative clause constructions, witness the fact that the same form occurs in main clause patterns, e.g., *wh*-interrogatives, as illustrated in (3):

- (3) a. *wâi* *yârâ* **sukâ** *ganî tî*
 who children 3pl.REL-PERF see
 ‘Whom did the children see?’^H
- b. *awo* **nt-a-u-ei** **eβol** *to:n*
 and REL-PERF-3pl-come PCL where
 ‘and from where did they come?’ (Apoc. 7:13)^C

Note, however, that there is a substantial difference between Hausa and Coptic with respect to the syntactic position of the *wh*-phrase relative to the special inflected form. As shown by (3a), the questioned object *wâ* ‘whom’ appears ex-situ in front of the sentence subject *yârâ* ‘children’, while in (3b) the questioned prepositional object *eβol to:n* ‘from where’ remains in-situ in the postverbal

³ In Hausa, not every inflectional form has a relative counterpart, and some forms are therefore restricted to non-relative contexts. See Newman (2000) and Jaggard (2001).

position. We will elaborate on the correlation between relative aspect marking and syntactic positioning of interrogative phrases in section 1.2.

As already noted, relative aspects are not simply subordinate inflectional forms. Neither can they be analysed as interrogative scope markers *per se*, since there is yet another context in which they are commonly found, namely focusing sentences:

- (4) a. shìnkāfā Kànde **ta** kāwō (hà masārā ha)
 rice Kande 3f.REL-PERF bring NEG maize NEG
 'Kande brought RICE (not maize).'^H

- b. mpo:r pa-jere mp-u-tof-k gar e-ti-oikonomia
 no DD:sm:1s-son NEG:PERF-3p-appoint-2sm PCL to-this:sf-service
 alla **nt-a** p-tjoeis tof-k e-u-solsl
 but REL-PERF DD:sm-lord appoint-2sm as-INDEF:s-comfort
n-ne-sneu et waaß et joop hm p-tjaye
 for-DD:pl-brothers C⁰ be.holy C⁰ live inside DD:sf-desert

'No, my son! You have not been appointed (lit. they have appointed you) for this (hermitic) life-style, but the Lord has appointed you AS A COMFORT FOR THE HOLY BROTHERS who live in the desert' (Onnophr. 216:33-217:1)^C

It is clear, then, that relative aspect marking does not represent a clause-typing device that distinguishes interrogative from declarative clauses in the sense of Cheng (1991). Rather, the spellout of relative aspect reflects properties of information structure, and has therefore been described as a morphological signal of conceptually salient or focal information in both languages (see Jaggard 2001, Green & Jaggard 2000, Reintges 1998).⁴ We leave open here the question of whether the so-called narrative use of relative aspects in both languages can be reconciled with a focus account, since our main concern here is with the formal syntactic aspects of relative marking in interrogative clauses.

1.2. Syntactic distribution of relative aspects in *wh*-questions

We now take a closer look at the distribution of relative aspects in *wh*-questions. In both languages, there are two syntactic positions for interrogative phrases, one of which is clause-initial, and the other clause-internal. We assume a transformational approach where the clause-initial placement of the questioned constituent is derived by a movement operation, whereas clause-internal *wh*-phrases do not undergo movement, but remain in-situ. *Wh*-movement of

⁴ Although we do not discuss this further, it is plausible to include relative clauses within the cover-term 'focus', since relative clauses have some identificational function. See Jaggard (2001).

questioned subjects and adjuncts is illustrated in (5) and (6) respectively. In Hausa, *wh*-fronting represents the strongly preferred option, whereas in Coptic such examples are only marginally attested.

- (5) a. wà dà wà t_i **sukà** zō
 who.pl 3pl.REL-PERF come
 ‘Who came?’^H (Newman 2000:488)
- b. nim a-f-ent-k e-pei-ma
 who PERF-3sm-bring-2sm to-this-place
 ‘Who brought you here?’ (KHML I 3:7-8)^C
- (6) a. inā_i **ka** gan sù t_i
 where 2sm.REL-PERF see 3pl
 ‘Where did you see them?’^H (Newman 2000:491)
- b. eβol to:n a-tetn-ei e-pei-ma
 PCL where PERF-2pl-come to-this-place
 ‘From where did you come here?’ (Onnophr. 220:8)^C

Observe that in Hausa *wh*-fronting co-occurs with relative aspect marking, as (5a) and (6a) show. In Coptic, on the other hand, relative aspects are systematically absent in *wh*-fronting structures, as examples (5b) and (6b) show. The reverse obtains in *wh* in-situ questions. Not only is the non-movement option dispreferred in Hausa, it also blocks relative aspect marking, as shown by (7a) and (8a).⁵ This contrasts with Coptic Egyptian, where *wh* in-situ questions are commonly attested, and require the presence of relative aspect marking, as shown by (7b) and (8b):

- (7) a. **kin** ga dà wà dà wà à makarantà
 2sf.PERF see who.pl at school
 ‘Whom did you see at school?’^H (Jaggar 2001, ch12, fn5)
- b. e-i-na-tfe u na-k
 REL-1s-FUT-say what to-2sm
 ‘What shall I say to you?’ (AP Chaine no.28)^C
- (8) a. yā tàfi yàushē
 3sm.PERF go when
 ‘When did he go?’^H (Newman 2000:496)
- b. **nt-a-k-ei** e-pei-ma n-af n-he
 REL-PERF-2sm-come to-this-place in-what of-matter
 ‘How did you get here?’ (Onnophr. 206:29)^C

⁵ See Jaggar (2001) for a thorough description of the facts concerning ex-situ and in-situ *wh*/focus in Hausa, and Green and Jaggar (2001) for discussion.

The distributional patterns discussed so far are summarised in table 1, where + indicates the presence and – the absence of relative aspect marking.

TABLE 1. *Distribution of relative aspect (RA) in Hausa and Coptic wh-constructions*

		HAUSA	COPTIC
wh-fronting	<i>wh</i> -fronted subject	+ (5a)	- (5b)
	<i>wh</i> -fronted object	+	-
	<i>wh</i> -fronted adjunct	+ (6a)	- (6b)
wh-in-situ	<i>wh</i> -in-situ subject	<i>ungrammatical</i> ⁶	+
	<i>wh</i> -in-situ object	- (7a)	+ (7b)
	<i>wh</i> -in-situ adjunct	- (8a)	+ (8b)

To conclude this review of the descriptive facts, Hausa and Coptic employ the same type of specialised inflectional morphology in interrogative sentences, but are the mirror-image of one another with respect to the syntactic conditioning of this specialised morphology. In Hausa, *wh*-fronting requires relative aspect marking, while it is prohibited in the corresponding Coptic structures. Conversely, relative aspect marking is blocked in Hausa *wh*-in-situ constructions, but obligatory in Coptic. In the remainder of this paper, we will explore a configurational analysis of these distributional patterns with a view to establishing whether these follow from parametric variation within the inflectional system.

2. The configurationality of relative aspect marking

We will first outline our assumptions concerning the basic clause structure of the two languages. Of particular concern will be the different position of the inflectional element in the syntactic configuration, and the relative ordering of topic phrases on the one hand, and focus and *wh*-phrases on the other. A discussion of the latter point reveals that *wh*-fronting does not target the complementiser phrase as a landing site.

2.1. Hausa

In Hausa, the preverbal inflection word carries a range of information (person, number, gender, tense-aspect) and can be separated into ‘person marker’ and ‘tense-aspect marker’. For the time being, let us assume that the inflectional element is base-generated in the standard position as head of IP (see diagram 16a).

A movement analysis for *wh*- and focus phrases can be motivated on the basis of significant differences between these constructions and topic constructions, where both involve clause-initial positions (see Tuller (1986) and references cited

⁶ Green and Jaggard (2001) argue that *wh*-in-situ in Hausa is restricted to constituents carrying nuclear stress, hence the ungrammaticality of *wh*-in-situ subject questions.

there). As example (9) shows, multiple topics are possible, which is not the case for focus. Furthermore, topic structures do not trigger relative aspect marking, and show a preference for resumption:

- (9) àyukà_i kùwa, sanyī dai, yā gamà dà ita_i
 goat.DD.f TOP-PCL cold TOP-PCL 3sm.PERF finish with 3sf
 ‘The goat, well the cold, it finished it off.’ (Newman 2000:617)

As examples (5a) and (6a) show, however, focus fronting does trigger relative aspect marking. Resumption is also dispreferred in focus constructions. Topics and focus may co-occur, but topic precedes focus, as shown by example (10):

- (10) bàrāwò_i, Audù nē ya kashè shi_i
 thief.DD.m Audu COP.m 3sm.REL-PERF kill 3sm
 ‘As for the thief, AUDU killed him.’ (Newman 2000:621)

Furthermore, as Tuller (1986) shows, focus fronting structures display subjacency effects, but topic structures do not. For this reason, topics are assumed to be base-generated, whereas focus fronting involves a movement operation. The same reasoning can be applied to *wh*-fronting structures, where these pattern with focus phrases. As Tuller argues, *wh*-fronted and focus-fronted phrases must occupy the same position since they cannot co-occur.⁷ This is illustrated by the ungrammaticality of example (11):

- (11) *wà Kànde cè takè sô
 who Kande COP.f 3sf.REL.IMPERF love
 ‘Who does KANDE love?’

A further issue arises in relation to the optional copula in Hausa focus fronting structures, for example *cè* in (11). Tuller (1986) and Green (1997) argue that these constructions do not involve clefting in the sense of a bi-clausal structure. Instead, these constructions are argued to be monoclausal, where the focus or *wh*-phrase targets the clause-initial projection. Tuller adopts the standard assumption that the preposed *wh*-phrase targets the specifier of CP, but Green (1997) argues that the relevant projection is the Focus Phrase in the sense of Brody (1990) and much related research. The first argument concerns the optional presence of the copula, which can be reanalysed as a focus-marker that lexicalises the F⁰ head. Such an analysis is consistent with focus readings on non-verbal sentences, but we will not explore this issue further here. The second argument relates to the fact that preposed *wh*-/focus phrases may be preceded by a subordinating

⁷ Neither are multiple *wh*/focus constructions possible where one *wh*/focus phrase remains in-situ - with the possible exception of multiple *wh*-questions, where the in-situ *wh*-phrase receives an echo-question interpretation. See Newman (2000:494).

complementiser like *cêwā* ‘that’, as shown by (12). This strongly suggests that *wh*/focus fronting does not target CP, and that CP dominates FP:⁸

- (12) mutânên **sun** tsayà *cêwā* Kànde_i *cê* **sukè** sô t_i
 men 3pl.PERF insist C⁰ Kande COP.f 3pl.REL-IMPERF love
 ‘The men insisted that they love KANDE.’

2.2. Coptic

In Coptic, as in Hausa, the inflectional element is a free functional morpheme. Unlike Hausa, Coptic makes use of two positions for such inflectional elements, one preceding the subject and the other following it. The clause-internal position, however, is limited to root modals. Reintges (2001) argues that these inflectional elements are auxiliary verbs. For the purposes of this paper, we will not further explore the complex interaction between the two auxiliary positions, but assume without further discussion that the pre-subject auxiliary is base-generated in the first functional projection dominating IP. This projection corresponds to Rizzi’s (1997) Finite Phrase, such that the inflectional auxiliary stands in a local case-licensing relationship with the subject in specIP. See diagram (16b) for illustration.

Coptic Egyptian shows three interrogative patterns (*wh*-in situ, *wh*-fronting and *wh*-clefts, the latter involving a biclausal structure). All three interrogative patterns permit a lexicalised question cue in the form of a dedicated interrogative particle, which typically marks both biased and non-biased yes-no questions. Interrogative particles like *eye* must appear in the topmost position of the clause, thereby preceding *wh*-fronted or *wh*-clefted constituents, as examples (13a & b) illustrate:

- (13) a. eye etβe u tetn-tform nso:-n (*wh*-fronting)
 Q because.of what (PRES)-2pl-look for-1pl
 ‘For what reason are you looking for us?’ (Acts 3:12)^C
- b. eye u p(e) [_{CP} et na ʃo:pe hm p-et-ʃufou] (*wh*-cleft)
 Q what COP:sm C⁰ FUT happen to DD:sm-C⁰-dry.out
 ‘(It) (is) what that is going to happen to the one (tree) having dried out?’
 (Luke 23:31)^C

⁸ Embedded topics are also possible; cf.

i) mutânên **sun** tsayà *cêwā* Kàndè kùwa **sunà** sônta
 men 3pl.PERF insist C⁰ Kande TOP.PCL 3pl. IMPERF love-3sf
 ‘The men insisted that, as for Kande, they love her.’

- c. eye **ere** ne.tn-*fere* nutʃe eβol hn nim (*wh*-in-situ)
 Q REL (-PRES) DD:pl.2pl-son cast PCL in whom
 ‘In whom are your sons casting out (demons)?’ (Luke 11:19)^C

In line with Cheng (1991), we interpret this positional restriction as indicative of the fact that interrogative particles are base-generated in C^0 . Since the fronted or clefted *wh*-interrogative phrase always follows the question particle, it cannot be located in the specifier-position of the CP, but must rather occupy the specifier position of a functional projection below C^0 and above the IP domain. In line with Rizzi’s left periphery analysis, we assume that the relevant projection is the non-recursive Focus Phrase. Assuming that both *wh*-fronted/clefted and focus-fronted phrases occupy the same position, namely specFP, as in Hausa, a number of gaps in the Coptic documentation receive a principled explanation. Thus, neither multiple fronting nor a combination of in-situ and ex-situ *wh*-questions is attested. The same holds for focus constructions and a combination of *wh*- and focus, indicating that both constituents compete for the same syntactic position.

In Coptic, as in Hausa, topics may precede focus. Notice that the topic phrase *p-mow* in (14) does not correspond to any gap/resumptive in the associated clause:

- (14) eis p-mow u p(e) [_{CP} et kolue]
 look DD:sm-water what COP:sm C^0 (PRES)hold.back
 e-tra-tʃi-baptisma
 to-CAUS.INF:1s-get-baptize
 ‘(as for) water, (it) (is) what that stops me to get baptized?’ (Acts 7:36)^C

Unlike Hausa, the focus may be followed by a topicalised temporal adverb like *tenu* ‘now’, as in (15):

- (15) nim tenu p(e) [_{CP} et sorm m-p-meeʃe]
 who now COP:sm C^0 (PRES)-mislead DO-marker-DD:sm-crowd
 ‘(it) (is) who now that is misleading the crowd?’ (Ac. A&P 212:231)^C

In Coptic, then, the clefted *wh*-phrase can be both preceded and followed by a topicalised element, which provides further evidence that the focused phrase is not in specCP.

2.3. Interim summary

The basic aspects of Hausa and Coptic clause structure considered so far are schematically represented in the diagrams in (16) and (17), respectively:

(16) Hausa

[_{CP} [_C COMP [_{TOPP} TOPIC [_{TOP} TOP PCL [_{FOCP} FOC/*WH*-XP [_{FOC}(COP) [_{IP}SU [_I INFL+REL [_{VP}]]]]]]]]]]

(17) Coptic

[_{CP} [_C Q PCL [_{TOPP} TOPIC [_{TOP} [_{FOCP} FOC/*WH*-XP [_{FOC}∅ [_{FINP}AUX [_{IP} SU [_I AUX_{MOD} [_{VP}]]]]]]]]]]

It can be observed that the structural configuration of the topic-focus field in both languages is almost identical. The main structural difference concerns the presence of an extra functional projection for inflectional elements in Coptic (the Finite Phrase).

3. The syntactic conditioning of relative aspects

In the previous section, we have identified a dedicated position for *wh*- and focus constituents in the pre-clausal domain: the Focus Phrase. We have also briefly commented on the internal and external location of inflection in Hausa and Coptic, respectively. In this section we examine the syntactic factors conditioning relative aspect marking within the configurations that we have outlined. We propose an analysis of relative aspect marking cast in terms of syntactic anchoring: the linking of a propositional feature to a particular syntactic position. We will begin with an informal introduction to the functional role of syntactic anchoring, and then explore its relation to the range of syntactic positions available for *wh*-phrases in Coptic and Hausa.⁹

3.1. Anchoring the *wh*-feature to inflection

In line with Rizzi (1996) we assume that the illocutionary force of a matrix *wh*-question has to be specified in the structure because, unlike embedded *wh*-questions, there is no higher verb (like English *wonder* or *ask*), which lexically selects an interrogative complement. Rizzi argues that this *wh*-specification is anchored to inflection, a plausible assumption given the functional role of the inflectional head as the locus of core propositional features. In English, the *wh*-specification on the I⁰ node has no overt morphological reflex, hence the inflectional head has to move to the complementiser domain, via I-to-C movement, which results in subject-auxiliary inversion and creates a local relationship where the *wh*-phrase is in the specifier of CP, and the *wh*-marked auxiliary is in the head position.

⁹ Space does not permit a discussion of previous analyses, but see Tuller (1986, 1992) for an analysis in terms of covert I-to-C raising, and Haïk (1990) for an account in terms of Binding Theory.

In Hausa however, the *wh*-specification on the I^0 node does have an overt morphological reflex. This is why the inflectional head does not need to raise to a higher position to spell out the feature. In other words, the syntactic anchoring of the *wh*-specification is morphologically visible as relative aspect marking.¹⁰ In Coptic, on the other hand, syntactic anchoring of the *wh*-specification does not originate with the inflectional head, but with a designated functional head - the F^0 node dominating the externalised inflection in the Finite Phrase. We propose that F^0 has unchecked tense features, along with the *wh*-feature, a plausible hypothesis on the grounds that the *wh*-specification has to be linked to a finite proposition. For this reason, the auxiliary in the head of Finite Phrase raises to incorporate into F^0 , where the syntactic anchor is lexicalised as the relative aspect morpheme. This incorporation analysis captures in a straightforward manner the allomorphic variation of the relative aspect marker: it takes the form *nt-* when the Perfect auxiliary *-a* is incorporated, and the default form *e-* in all other contexts.

3.2. Licensing *wh*-in-situ

Recall that in Coptic, relative aspect marking co-occurs with *wh*-in-situ. This correlation receives a straightforward explanation if we assume that the syntactic anchoring of the *wh*-specification to a designated structural position serves as a licensing device for the *wh*-phrase to remain in situ. This analysis is in line with Cheng (1991), Cheng and Rooryck (2000) and related research. In clause-internal position *wh*-phrases do not have interrogative scope. For this reason, an independent scope-marker has to be inserted into the structure in the form of the relative aspect marker.

Turning to Hausa, recall that relative aspect marking does not co-occur with *wh*-in-situ. How can we explain the absence of the syntactic anchoring device in these contexts? We propose that the specialised interrogative tone pattern (clause final low tone), described by Newman (2000) and Jaggar (2001) as the ‘Q-morpheme’, is what licenses *wh*-in-situ. The marginal status of *wh*-in-situ in Hausa (as opposed to Coptic) might receive a partial explanation from the restriction of this licensing device to matrix clauses, as described for French by Cheng and Rooryck (2000). Embedded *wh*-in-situ is not attested in Hausa.

3.3. Wh-movement and feature matching

Having discussed the licensing of *wh*-in-situ questions, we turn now to the syntactic conditioning of *wh*-movement. For Coptic, we observed a strict complementarity between *wh*-fronting and relative aspect marking. Given that relative aspect licenses *wh*-in-situ in Coptic, it follows that when the *wh*-phrase raises to a scope position, syntactic anchoring can be dispensed with. Thus, what we are dealing with is a maximally economical operation for interrogative scope

¹⁰ This is not restricted to matrix clauses in Hausa, however. Embedded *wh*/focus constructions display relative aspect. For most speakers, however, only the matrix INFL occurs in the relative form in cases of successive cyclic movement, which is consistent with the present analysis.

assignment. There exist only two options: either the insertion of a lexicalised scope marker, or movement to a scope position. This state of affairs falls within the predictions of the Clause Typing Hypothesis (Cheng 1991), according to which a clause is typed as a question either by means of a question morpheme or by means of *wh*-fronting.

In Hausa, on the other hand, the co-occurrence of relative aspect marking and *wh*-fronting represents a derivationally more complex option. The data show that *wh*-movement has to be accompanied by the presence of the syntactic anchor, which is reminiscent of the situation in English regarding subject-auxiliary inversion. The question arises of what necessitates such an anchoring device, given that the *wh*-phrase is in the designated scope position. Moreover, the syntactic anchor is not in a local relation with any functional head in the *wh*/focus domain.

A plausible solution may be offered by recent developments within the Minimalist framework, concerning the construction of a cyclical domain or ‘derivational phase’ in the terms of Chomsky (2001). In Hausa, the relative aspect and the *wh*/focus-phrase have a substantial part of their feature composition in common. That is, both elements have a *wh*/focus feature as well as nominal functional features - or *phi*-features - (in the case of subject *wh*/focus-phrases) such as person, number and gender, as well as case features, the main difference being the additional tense/aspect features in the inflectional complex. In the course of building the lower cyclical domain, that is, the inflectional phrase, *wh*/focus-features of both the *wh*/focus-phrase and the relative aspect have to be ‘matched’. This matching, known as ‘agree’, is accomplished by bringing both elements together in a particular structural configuration. Assuming a split INFL and a VP-internal subject, the agree relation is triggered by the movement of the *wh*/focus-phrase via the projections of the inflectional heads, en route to the second cyclical domain, the *wh*/focus domain. Example (18) illustrates the derivation of a subject NP question, where both *phi*- and *wh*-features on INFL agree with the subject. The derivation of an object NP question is illustrated in (19), where *phi*-features on INFL agree with the subject, and the *wh*-feature with the object:¹¹

(18) subject NP question

$[_{FP} NP [_{+wh}] [F_0] [_{AGRSP} t_i [_{AGRS} INFL+V] [_{TP} t_i [_{T[+wh]} t_v] [_{AGROP} OB [_{AGRO} t_v] [_{VP} t_i [v t_v] [_{NP} t_{OB}]]]]]]]$

(19) object NP question

$[_{FP} NP [_{+wh}] [F_0] [_{AGRSP} su [_{AGRS} INFL+V] [_{TP} t_{SU} [_{T[+wh]} t_v] [_{AGROP} t_i [_{AGRO} t_v] [_{VP} t_{SU} [v t_v] [_{NP} t_i]]]]]]]$

4. Summary and conclusions

In this paper we have explored the phenomenon of relative aspect marking in two related Afroasiatic languages from the perspective of how morphology and

¹¹ Note that this analysis incorporates verb raising. See Green (1997) for discussion.

syntax interact in the derivation of *wh*-questions. In both languages, relative aspect marking has an anchoring function. In Coptic, the anchor is associated with a clause-external position, and serves as a scope-marking device, which permits the *wh*-phrase to remain in-situ. In Hausa, on the other hand, the anchor is involved in the construction of a cyclic domain which marks the first derivational phase of a *wh*-fronting construction. It follows from this analysis that *wh*-anchoring is absent from *wh*-in-situ in Hausa. This contrasts with Coptic, where *wh*-fronting blocks the introduction of a syntactic anchor into the structure. This analysis can be extended to focus constructions, since relative aspect marking anchors a substantive scopal feature in the structure, which may be [+*wh*] and/or [+focus].

References

- Brody, M. 1990. Some Remarks on the Focus Field in Hungarian. *UCL Working Papers in Linguistics* 2: 201-225.
- Cheng, L. 1991. *On the Typology of Wh-questions*. PhD dissertation, MIT Published 1997, New York: Garland.
- Cheng, L. and J. Rooryck. 2000. Licensing *wh*-in-situ. *Syntax* 3:1-19.
- Chomsky, N. 2001. Derivation by Phase. In M. Kenstowicz (ed.) *Ken Hale: A Life in Linguistics*. [Current Studies in Linguistics 36]. Cambridge, Mass.: MIT Press:1-52.
- Green, M. 1997. *Focus and Copular Constructions in Hausa*. PhD dissertation, SOAS.
- Green, M. and P.J. Jaggard. 2001. Ex-situ and in-situ focus in Hausa. *Cognitive Science Research Papers* 527, School of Cognitive and Computing Sciences, University of Sussex.
- Haik, I. 1990. Anaphoric, pronominal and referential INFL. *Natural Language and Linguistic Theory* 8:347-374.
- Jaggard, P.J. 2001. *Hausa*. London Oriental and African Language Library. Amsterdam: John Benjamins.
- Newman, P. 2000. *The Hausa Language: an Encyclopedic Reference Grammar*. New Haven and London: Yale University Press.
- Reintges, C.H. 1998. Verbal morphology and information structure: the case of Coptic Second Tenses. In A. Bruyn and J. Arend (eds.) *Mengelwerk voor Muysken*. Publications of the department of general linguistics of the University of Amsterdam. Amsterdam: Bureau Grafische Producties Universiteit van Amsterdam: 82-86.
- Reintges, C.H. to appear. *Coptogram: A Teaching Grammar of Sahidic Coptic*. Cologne: Rüdiger Köppe Verlag.

- Reintges, C.H. 2001. In press. Aspects of the morphosyntax of subjects and objects in Coptic Egyptian. In H. Broekhuis and T. van der Wouden (eds.) *Linguistics in the Netherlands 2001*. Amsterdam: John Benjamins.
- Rizzi, L. 1996. Residual Verb Second and the *Wh*-criterion. In A. Belletti and L. Rizzi (eds.) *Parameters and Functional Heads*. Oxford: Oxford University Press: 63-90.
- Rizzi, L. 1997. The Fine Structure of the Left Periphery. In L. Haegeman (ed.) *Elements of Grammar*. Dordrecht: Kluwer: 281-337.
- Schuh, R.G. 1985. Hausa Tense/aspect/mood (TAM) system. Unpublished MS, UCLA.
- Tuller, L. 1986. *Bijjective relations in Universal Grammar and the syntax of Hausa*. PhD dissertation, UCLA.
- Tuller, L. 1992. The syntax of postverbal constructions in Chadic. *Natural Language and Linguistic Theory* **10, 2**, 303–334.

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