Syntactic conditions on special inflection: evidence from Hausa and Coptic Egyptian interrogative and focus constructions

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This comparative study examines the morphosyntactic parameters governing the distribution of special inflection in constituent questions and focus constructions in Hausa and Coptic Egyptian. In these languages, ‘relative’ tense-aspect-mood (TAM) markers occur in relative clauses, constituent questions and a range of declarative focus contexts, which are thus morphologically distinguished from pragmatically neutral declaratives. Relative TAMs bear direct evidence for these sentences as a natural class. However, a close comparison of the Hausa and Coptic evidence also shows that the presence of special inflection is governed by syntactic conditions, since both languages also have focus/wh-constructions that lack relative TAMs. We provide a configurational analysis of the distributional behaviour of relative TAMs in which parameters governing the pronunciation site of the moved focus/wh-phrase play a central role.

0. Introduction: a special inflection for operator-variable constructions
Since the 1970s, considerable attention has been paid to the syntactic similarities between such apparently diverse construction types as relative clauses, constituent questions and focus structures. What these sentence types have in common is that they are most insightfully analysed as OPERATOR-VARIABLE CONSTRUCTIONS: they all involve an open position or ‘variable’ that is assigned an interpretation by a scope-taking operator, e.g., whom, did you meet yesterday? In the generative transformational framework, the operator-variable relation has been described as the outcome of a movement operation that links two or more positions in the syntactic structure (see Chomsky 1977 and much subsequent research). The evidence for the unity of these sentence constructions was, and still is largely indirect: since operator-variable dependencies typically involve syntactic reordering, one of the linked positions is usually phonetically empty. Indeed, in Browning’s (1987) analysis, the operator and the variable may be phonetically unrealised, e.g., the man, you met yesterday] (where Op stands for the null counterpart of the relative pronoun whom). For this reason, the existence of operator-variable dependencies is often established only upon the basis of syntactic tests that identify locality constraints on movement, and upon interpretive judgements concerning scope readings.

There is, however, direct morphological evidence for operator-variable constructions as a natural class. In a number of genetically related and unrelated languages, relative clauses, interrogatives and declarative focus constructions are distinguished from unmarked declarative

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clauses by means of a special type of inflectional morphology. The present study investigates the syntactic conditions governing the presence of this specialised morphology in Hausa and Coptic Egyptian. These languages belong to distinct branches of the Afroasiatic phylum. Hausa belongs to the Western branch of the Chadic family and has an estimated 30 million first language speakers (Jaggar 2001). Coptic Egyptian, an extinct language, was the indigenous language of late-antique and early medieval Christian Egypt (from about the third to the eleventh century CE) and represents the final development stage of Ancient Egyptian.1 This study represents the first comparative syntactic analysis of two Afroasiatic languages that spans the divide between currently spoken and dead languages. Despite the restrictions imposed on such a study by the finiteness of the Coptic corpus, we will show that a systematic comparison provides new insights into the morphosyntax of focus and interrogative constructions in these two languages. In addition, the findings of this study contribute to the cross-linguistic typology of this class of operator-variable constructions.2

In Hausa, special inflection is manifest in the perfective and imperfective TAMs, which divide into two paradigms, the ‘general’ and the ‘relative’. The latter is selected in relative clauses, wh-fronting questions and focus-fronting constructions (1). The relative perfective third person plural suka is morphologically distinct from its non-relative counterpart sun, which occurs in unmarked declarative clauses. Relative forms are indicated throughout by boldface, and focus/wh- phrases by italics in the Hausa and Coptic examples. Focused constituents are indicated by small capitals in the free translation.3,4

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1 According to the main working hypothesis in comparative Afroasiatic linguistics, the family tree divides into six branches: Semitic, Berber, Cushitic, Ancient Egyptian, Chadic and Omotic (Greenberg 1963). Ancient Egyptian is the only branch of Afroasiatic that is represented by a single language (Loprieno 1995). The largest native Hausa speaking population is in northern Nigeria and in the southern areas of the Republic of Niger, where Hausa represents the majority language (Jaggar 2001:1-2). The Hausa data in this paper, unless indicated otherwise, were provided or verified by our language consultants. Coptic Egyptian survives only as the liturgical language of the present-day Coptic Orthodox Church. The Coptic data in this article are taken from the well-studied Sahidic (Upper Egypt) dialect of Coptic, which due to its rich literature represents the main reference dialect for this language. For the textual sources of the Coptic examples, see Reintges (2004a: 597-600).

2 Although this study incorporates historical data from Coptic Egyptian, our aim is not to reconstruct the Afroasiatic origins of special inflection, but to provide a ‘synchronic’ analysis of this phenomenon. See Newman and Schuh (1974) and Schuh (2000) for relevant discussion of the reconstruction of relative TAMs in Proto-Chadic. See Polotsky (1944: 69-96) and Loprieno (1995, ch. 7) for relevant discussion of the precursors of Coptic relative TAMs.

3 Hausa transcription system: à / ø = low tone; á = falling tone (bimoraic syllables only); high tone is unmarked. A macron over a vowel indicates length, e.g., á is long, a is short. β (B) and d (D) = implosive; k (˥) = ejective; * = glottal stop [ʔ]; r = alveolar tap/roll; c and j = palato-alveolar affricates; ’y = laryngealised palatal glide.

Hausa relative TAMs

(1) a. yäròn [dà sukà dôkà] yanà asibità 
   boy.DD COMP 3PL.REL.PF beat 3MS.IMPF hospital
   ‘the boy that they beat up is in hospital’ (Jaggar 2001: 528)
   b. mè yàrà sukà cè?
      what children 3PL.REL.PF say
      ‘what did the children say?’
   c. yàr̀ (nè) sukà gani
      children FM.pl 3PL.REL.PF see
      ‘they saw THE CHILDREN’

In Coptic Egyptian, special inflection takes the form of a relative marker. As in Hausa, this special inflection marker occurs in relative clauses, *wh*-constructions and declarative focus constructions (2). Pragmatically neutral declarative clauses, by contrast, have no such relative marking.

Coptic relative TAMs

(2) a. u-hoβ [ere pà–nute moste əmмо-f]
   INDEF.S-thing REL(-PRES) DD.MS-god hate DO-3MS
   ‘a thing that God hates’ (Acts Andrew & Paul 202:126-127)
   b. ere naí na-šöpe tô-nau?
      REL(-FUT) DEM.PL AUX-become DD.FS-hour
      ‘when are these (things) going to happen?’C (Mark 13:4)
   c. alethɔs ere agathon nim ʃoop øn-n-et-na-ei
      very REL(-PRES) good every happen to-DD.PL-COMP-go-come
      e-pe.k-topos ə Mena(…)
      to-DD.MS.2MS-shrine VOC Mena
      ‘verily, FOR THOSE WHO WILL COME TO YOUR SHRINE all good things are bound to happen, oh Mêna (….)’C (Mena, Mirc. 16b:12-18)

While in both languages *wh*-questions are marked by the same inflectional morphology that is employed in relative clauses, they differ systematically from one another in terms of the syntactic conditions under which this morphology appears. In Hausa, relative aspects pattern together with the fronting of the focus/wh-phrase, while in Coptic, relative aspects pattern together with focus/wh-in situ. These distributional patterns highlight the two facets of special inflection: on the one hand it unifies a class of constructions, while on the other hand it is subject to parametric variation in terms of the syntactic conditions that govern its presence.

This comparative study of the syntactic conditions of special inflection has an empirical as well as a theoretical component. At the empirical level, we demonstrate how the syntactic properties of this class of constructions correlate with the general or relative form of the inflection word. In addition, in view of recent hypotheses concerning the nature of the interface indicating particle’; VOC ‘vocative particle’; VN ‘verbal noun’; WH ‘Wh-agreement’. Glosses are given in parentheses for morphemes that have no surface-segmental shape.
between syntax and information structure (e.g., É. Kiss 1998), close attention is also paid to the interpretive aspects of declarative focus sentences. From a wider comparative perspective, we briefly consider how the Hausa and Coptic patterns fit the typological profile of special inflectional morphology.

At the theoretical level, this comparative study addresses two main issues. The first issue concerns the position targeted by focus/wh-displacement operations, which we will identify as the left-peripheral focus position (Brody 1990; Rizzi 1997; Cinque 1999). Secondly, we show that Coptic in-situ focus/wh constructions display characteristics of a movement configuration in much the same way as Hausa ex-situ focus/wh-constructions, an avenue of investigation that provides a better understanding of why special inflection occurs in these constructions. This analysis carries over to Hausa focus/wh-in situ and Coptic focus/wh-ex situ constructions, in which special inflection does not occur. Key to this analysis is Reintges, LeSourd and Chung’s (2006) proposal that certain cases of wh-in situ are only ‘apparent’ in the sense that they show the hallmarks of wh-movement despite the phonological realisation of the wh-phrase in its canonical clause-internal argument or adjunct position.

1. A paradigmatic split in the tense-aspect-mood system
In this section we review the paradigmatic split of the Hausa and the Coptic conjugation system into a ‘general’ and a ‘relative’ tense-aspect-mood (TAM) inflection. In both Hausa and Coptic, the TAM morphology occurs independently from the verb.

1.1. The morphology of relative TAMs
In Hausa, the inflection word (person-TAM complex) follows the subject. Although certain forms show fusional morphology, other forms can be segmented into a TAM marker and a subject-agreement morpheme (marking person, number and gender), which licenses empty subject (pro-drop) constructions. The subject-agreement marker is usually prefixed to the TAM morpheme except in the future and allative, where the order is reversed and where the two morphemes are free.5 Table 1 presents the affirmative general and relative perfective and imperfective paradigms, exemplified with the verb tāfi ‘go’, which occurs in its verbo-nominal form tāfiyà in the imperfective. Relative aspect marking is morphologically realised by short /a/ or suffixation of -kà or -kè to the person marker.

In Coptic Egyptian, the inflection word indicates a particular temporal, aspectual, or modal category, but does not express person, number or gender features. These features are manifest in obligatory subject and object clitic pronouns. Table 2 presents the inflectional paradigms of the affirmative general and relative present, habitual, future, and perfect, exemplified with the verb sotam ‘to hear’. The relative form is derived from the general form by the addition of a designated relative marker. The relative marker on- is restricted to the perfect tense-aspect, while the relative marker e- represents the ‘elsewhere’ form, which is selected in all other contexts.

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5 In segmentable forms, the subject-agreement marker can be omitted in certain appropriate environments; see Newman (2000:564-5), e.g.:

(i) yàrò yà-na / nà gyàrà kèkè boy 3MS-IMPF/IMPF repair bicycle
‘the boy is repairing the bicycle’ (Newman 2000: 564)
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<thead>
<tr>
<th></th>
<th>PERFECTIVE</th>
<th>IMPERFECTIVE</th>
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<td>kanà tàfiyà</td>
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<td>kin tàfi</td>
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<td>anà tàfiyà</td>
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<tr>
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<td>nakè tàfiyà</td>
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<td>INDEF.</td>
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Table 1. The inflectional paradigms of the Hausa perfective and imperfective

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<td>te-na-sɔtəm</td>
<td>are-sɔtəm</td>
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<td>e-ʃare DP sɔtəm</td>
<td>ere DP na-sɔtəm</td>
<td>ant-a DP sɔtəm</td>
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Table 2. The inflectional paradigms of Coptic absolute tenses
1.2. Distributional restrictions on relative TAMS

Of the nine distinct TAM paradigms in Hausa, only the perfective and imperfective show a morphological distinction between general and relative forms. In contrast, the future and habitual TAMS do not assume distinct morphology in interrogative and focus constructions. The absence of the general-relative constrast in future tense contexts is exemplified in (3), where the same form zài appears in both pragmatically neutral declarative clauses and wh-questions.

**Hausa declarative and wh-interrogative with future tense**

(3) a. zài gamà aikin gòbe.
   FUT.3MS finish work,DD tomorrow
   ‘he’ll finish the work tomorrow.’ (Jaggar 2001:194)

b. wà zài shìga riiyañ nàn?
   who FUT.3MS enter well DEM
   ‘who will enter this well?’ (Newman 2000:584)

Unlike the future and habitual TAMS, subjunctive and potential forms are not licensed in focus/wh-fronting constructions (4).

**Ungrammaticality of focus/wh-fronting in Hausa subjunctive clauses**

(4) a. *nà cè [mè yà yi]
   1S.PF say what 3MS.SUBJ do
   ‘I said what he should do’ (Tuller 1986: 69)

b. *munà fàta [sàbuwàf mòìtà cè yà sayà manà ]
   1PL.IMPF hope new.of car FM.F 3MS.SUBJ buy 10.1PL
   ‘we hope he buys a NEW CAR for us’ (Tuller 1986a: 70)

Tuller (1986: 71-4, 108) and Jaggar (2001: 504) attribute this restriction to a semantic incompatibility between modality and focus. Indeed, according to Jaggar, a focus interpretation is what conditions the presence of special inflection.⁶ Although Jaggar’s reductionist approach is appealing from a conceptual point of view, it is not entirely clear whether a semantic ‘focus’ analysis carries over to (restrictive) relative clause constructions, where relative aspect marking is obligatory, or conditional and temporal adjunct clauses, where it is optional (see Jaggar, in press (b) for further discussion).

Moreover, while Coptic relative TAMS are also in complementary distribution with the subjunctive, the future and habitual paradigms, are fully compatible with relative aspect marking. Besides the affirmative relative forms in table 2, Coptic has the conditional e-f-šan-sòtòm ‘if/when he hears’ and the ‘third future’ e-f-sòtòm ‘he shall hear’, which only appear with the relative marker e-. Both modal forms are illustrated in (5).

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⁶ Jaggar (2001: 162, footnotes 4 & 5) suggests that the term ‘relative’ be replaced with the cover term ‘focus’ to provide a semantic characterisation of the environments in which relative aspects are licensed and/or required. It is worth pointing out that the information structure of this construction type has received alternative analyses in terms of topicalisation (see Kuno 1976; Bresnan & Mchombo 1987 and Haiman 1978).
The Coptic Conditional and Third Future

(5) tšekas [e-f-šan-ei na-f-tōham ]
    COMP REL-3MS-COND-come CONJ-3MS-knock
    e-u-e-ṃon na-f anteunu
    REL(FUT)-3PL-PREP-open for-3MS immediately
   ‘so that when he comes and knocks they may open the door to him immediately’
   (Luke 12:36)

On the basis of this comparative evidence, we conclude that special inflection and modal TAMS are not in complementary distribution, and we therefore suggest that restrictions on the distribution of relative TAMS follows from the ‘impoverished’ structure of subjunctive clauses (§ 7.1).

2. Wh-questions
Hausa and Coptic are both discourse-configurational languages, where topic and focus prominence may involve a departure from the canonical subject-verb-object (SVO) surface order that is found in pragmatically neutral statements of the kind in example (6). (Hausa examples are marked with superscript H and Coptic examples with superscript C):

Canonical SVO sentences

(6) a. Audu yā sāyi bakař mōtā jiya
    Audu 3MS.PF buy black.of car yesterday
    ‘Audu bought a black car yesterday’
   H
b. a te.f-sone de ọl ọn-ne.f-kees
   PERF DD:FS.3MS-sister PCL gather DO-DD.PL.3MS-bones
   ‘his sister gathered his bones’ (Mena, Mirc. 4a:1-2)
   C

2.1. Main clause questions
Beginning with subject wh-questions, observe that the Hausa and Coptic examples both show SVO surface order.

Subject wh-questions

(7) a. su-wanę (nē) sukā sāyi bakař mōtā?
    3PL-who FM.PL 3PL.REL.PF buy black.of car
    ‘who (plural) bought a black car?’
   H
b. ere nim na-na na-n?
    REL(-FUT) who AUX-have.mercy for-1PL
    ‘who will have mercy upon us?’
   C (Shenoute, Paris 1315:4v: a14 [Layton 2000:249])

In the Coptic example, the question word nim ‘who’ occupies the pre-verbal subject position. The question arises of whether the Hausa example should also be analysed as a case of wh-in situ, or as a case of ‘string vacuous’ wh-movement to a left-peripheral position (see Clements, McCloskey, Maling & Zaenen (1983); Chomsky (1986); Rizzi (1990) and Agbayani (2000)). In
fact, there are two types of evidence in favour of a movement analysis. Firstly, the presence of 
relative aspect marking is itself suggestive of movement, given that this special inflection 
patterns with syntactic reordering in non-subject wh-questions. The second piece of evidence 
concerns the optional presence of the focus-marking copula nê (SG.M; PL)/cê (SG.F) in subject 
questions like (8a), which agrees in number and gender with the preceding constituent. In focus 
and wh-constructions, this focus-marking copula indicates displacement to a clause-external 
position in the left periphery (Newman 2000: 189).7

Given the evidence in favour of the clause-external position of the wh-subject in Hausa, the 
question arises of whether such structures are best analysed as monoclausal wh-fronting 
constructions or as biclausal cleft sentences. Indeed, a clefting analysis has been proposed in 
early work by McConvell (1973), but is generally rejected in more recent analyses on the 
grounds that while cleft constructions contain a relative clause-like structure, Hausa wh-fronting 
constructions do not tolerate either relative pronouns or relative complementisers (Tuller 1986; 
Green 1997, 2007; Newman 2000; Jaggar 2001).8 In Coptic wh-subject questions, the 
interrogative pronoun nim ‘who’ displays a clear statistical preference for clefting, which 
does not focus with wh-interrogation. However, there are no grounds to doubt the 
grammaticality of wh-in-situ questions like (7b), although this has been disputed in the 
traditional literature (e.g., Polotsky 1944).

The issue of string vacuous movement does not arise for Hausa direct object questions, which 
present a clear departure from the canonical SVO order. Further evidence for a movement 
analysis is found in the verbal-inflectional morphology. Not only does the inflection word 
assume its relative aspect form, but also the stem-final vowel in ‘grade 2’ verbs signals the 
presence of a gap in the direct object position.9 Thus, compare the verb form sâyì ‘buy’ in (7a)

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7 The basic wh-formative wà ‘who’ (su-wà ‘who.pl’) can be augmented by a repeat copula: wànê nê (SG.M), wàcê cê (SG.F), su-wànê nê (PL) (Newman 2001:488-9; Jaggar 2001:513-4).

8 For the syntactic analysis of cleft constructions see, among others, Schachter (1973), Heggie (1993), Lambrecht (2001), Doetjes, Rebuschi & Rialland (2003). Hausa focus fronting constructions should not be confused with ‘pseudoclefts’ in which the non-verbal copula and the relative pronoun co-occur, but which are – like their English counterparts – copular sentences in which two nominal constituents are equated, one of which is a headless relative clause.

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9 Grade 2 verbs like sâyì ‘buy’ show a distinct tone pattern and/or final vowel alternation depending on the type of complement that is selected (Newman 2000: 637-643; Jaggar 2001: 230-235).

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(i) a. [waddà nakè sô ] Kànde cê
    RELPRO.FS 1S.REL.IMPF love.VN Kande FM.F
    ‘the one I love is KÀNDE’
    b. Kànde cè [ waddà nakè sô]
    Kande FM.F RELPRO.FS 1S.REL.IMPF love.VN
    ‘KÀNDE is the one I love’

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(i) a. zân sâyè sù
    FUT.1S buy PRO.3PL
    ‘I’ll buy them’
    b. zân sâyì rìgà
    FUT.1S buy dress
    ‘I’ll buy a dress’
above with the alternating form sâyā in (8a) below. Similarly, in the Coptic direct object question, the verbal stem še ‘say’ in (8b) appears in the ‘construct state’ form, which is selected when a nominal direct object is adjacent to the verb and forms a prosodic unit with it (Reintges 2004a: 217-9).

**Direct object wh-questions**

(8)  a. mè sukà sâyā à kàsuwà?
    what 3PL.REL.PF buy at market
    ‘what did they buy at the market?’

   b. e-i-na-tše u na-k?
    REL(-FUT)-1S-AUX-say what to-2MS
    ‘what shall I say to you?’

   (Apoph. Patrum, Chaîne no. 28, 5:25)

In Hausa, two strategies are available for questioning prepositional objects. The preposition can either be ‘pied-piped’, as in (9a), or stranded, as in (9b) below. The latter strategy triggers the insertion of the resumptive pronoun shì ‘him’ in the prepositional object position (Tellier 1991) (co-indexation indicates the co-reference between the wh-phrase and the pronominal copy). Thus, the displaced wh-phrase is phonologically realised both in the left periphery and in the extraction site.

**Hausa prepositional object wh-questions**

(9)  a. gà wà ìtì	kà mai dà littàfìn?
    to who 2MS.REL.PF return with book.DD
    ‘to whom did you return the book?’

   b. zàn sàyà wà mâtātā rìgà
    FUT.1S buy 10M wife.1S dress
    ‘I’ll buy a dress for my wife’

   c. mè zá kì sàyà rì?
    what FUT 2FS buy
    ‘what will you buy?’

   d. mè rá kì sàyà rì?
    what FUT 2FS buy
    ‘what will you buy?’

   e. kin sàyà?
    2FS.PF buy
    ‘did you buy (it)?’

   (null object)

   (indirect object)

   (extracted wh-object)

   (pied-piping)

10 The same pattern can be observed in Hausa wh-possessives. As shown by the contrast between (ia) and (ib), either the entire possessive NP is pied-piped, which is the only option with subjects, or the questioned possessor noun is extracted out of the wh-possessive, which conditions a resumptive pronoun in the base position:

(i)  a. ’yàrì wà ìtì	kà àurì?
    daughter.of who 2MS.REL.PF marry
    ‘whose daughter did you marry?’

   (Jaggar 2001: 521)

   b. wà ìtì	kà àuri ’yàrìsà?
    who 2MS.REL.PF marry daughter.of.3MS
    ‘whose daughter did you marry?’

   (Jaggar 2001: 521)
b. wài ka mai dà littäfin gärē shì?
who 2MS.REL.PF-return with book-DD to 3MS
‘whom did you return the book to (him)?’ (adapted from Jaggar 2001: 521)

In Coptic, questioned prepositional objects are not distinct from direct objects in terms of their syntactic position, although the verb appears in the ‘absolute state’ form, since prepositional complements may, but need not be adjacent to the verb.

*Coptic prepositional object wh-questions*

(10) a. e-tëtën-šine ñansa nim?
    REL(-PRES)-2PL-look for who
‘who are looking for?’ (John 18:4)

b. e-k-šone e-u?
    REL(-PRES)-2MS.be.sick at-what
‘what do you suffer from?’ (Budge, Martyrd. 208:28-29)

Neither Hausa nor Coptic shows asymmetry between argument and adverbial questions, as illustrated by the following examples.

*Adverbial wh-questions*

(11) a. inä sukä jë?
    where 3PL.REL.PF go
‘where have they gone?’ H (adapted from Jaggar 2001: 517)

b. e-k-neu tän pa-son?
    REL(-PRES)-2MS-come_STAT where DD.MS.1S-brother
‘where are you coming from, my brother?’ C (Acts Andrew & Paul 198:64-65)

(12) a. ta yâyâ kukä sâmi wurin shigä?
    by.means.of how 2PL.PF find way enter.VN
‘how did you find a way to get in?’ H (Newman 2000: 492)

b. ŏnt-a-k-ei e-peï-ma ūn-aš ūn-he?
    REL.PF-2MS-come to-DEM.MS-place in-which of.manner
‘how did you come to this place?’ C (Budge, Martyrd. 206:29)

Since Hausa employs *wh*-movement, this pattern is to be expected. As in other languages in which *wh*-in situ is the canonical strategy for question formation, Coptic *wh*-arguments and *wh*-adjuncts are both licensed in situ.

*2.2. Embedded wh-questions*

It is well known that it is the selectional properties of the main clause verb that license embedded questions. Thus, the Hausa verb ëmëbayà ‘ask’ selects an interrogative complement, which results in an indirect question interpretation (13a). This restriction is reflected in the selection of the complementiser: the interrogative complementiser kō ‘whether’ is optionally
selected by this verb (13a), while the declarative complementiser *céwà* ‘that’ gives rise to an ungrammatical sentence (13b). Observe that the embedded inflection word occurs in the relative aspect form, since the embedded clause has the structure of a direct *wh*-question.

(13) a. Kànde tä tâmbàyê nì [(kô) mè na sąyà à kàsuwà]  
Kande 3FS.PF ask 1S (COMP) what 1S.REL.PF buy at market  
‘Kande asked me what I bought at market’

b. *Kànde tä tâmbàyê nì [céwà mè na sąyà à kàsuwà]  
Kande 3FS.PF ask 1S COMP what 1S.REL.PF buy at market  
‘Kande asked me what I bought at market’

In contrast, the Hausa verb *yi tsàmmànì* ‘think’ selects a declarative complement. As a consequence, this verb does not license embedded questions (14a), although main clause questions are well-formed (14b). As shown by the grammaticality contrast between (14a) and (14b), this verb only licenses the declarative complementiser *céwà*.

(14) a. *Kànde tanà tsàmmànìn [wà ya sąyì lìttäfìn à kàsuwà]  
Kande 3FS.IMPF thinking who 3MS.REL.PF buy book.DD at market  
‘Kande thinks who bought the book at market’

b. wà Kànde takè tsàmmànìn [céwà yì såyì lìttäfìn à kàsuwà]?  
who Kande 3FS.REL.IMPF thinking COMP 3MS.PF buy book.DD at market  
‘who does Kande think (that) bought the book at market?’

c. *wà Kànde takè tsàmmànìn [kô yì såyì lìttäfìn à kàsuwà]?  
who Kande 3FS.REL.IMPF thinking COMP 3MS.PF buy book.DD at market  
‘who does Kande think (whether) bought the book at market?’

The Hausa verb *sanì* ‘know’ licenses both declarative complements and interrogative complements. It follows that both direct questions (15a) and indirect questions (15b) are well-formed, as long as the appropriate complementiser is selected: the selection of *kô* is ungrammatical in direct questions (15c), as is the selection of *céwà* in indirect questions (15d).

(15) a. wà Kànde ta san [(céwà) yì såyì lìttäfìn à kàsuwà]  
who Kande 3FS.REL.PF know (COMP) 3MS.PF buy book.DD at market  
‘who does Kande know (that) (he) bought the book at market?’

b. Kànde tä san [kô wà ya såyì lìttäfìn à kàsuwà]  
Kande 3FS.PF know COMP who 3MS.REL.PF buy book.DD at market  
‘Kande knows who bought the book at market’

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11 The Hausa verb *yi tsàmmànì* ‘think’ is what Jaggar (2001: 430) describes as a ‘phrasal verb’, consisting of the verb *yi* ‘do’ followed by an activity noun. In imperfective constructions like (14b), which require the nominalised form of the verb that follows the inflection word, the nominalised form of *yi* (*yôn “do.vn.of”) is usually omitted, in which case the imperfective inflection word is followed directly by the activity (verbal) noun.
(16) awɔ ne-f-sown an [tʃe e-f-na-nt-f tɔn ]
and PRET-3MS-know NEG COMP(-FUT)-3MS-AUX-bring-3MS where
‘and he did not know where he could bring it (the money) to’ (Apoph. Patrum, Elanskaya 13b:34-35)

The reportative verb tʃɔ ‘say’ can take either a declarative or an interrogative complement. In the latter case, the embedded wh-in-situ clause can give rise either to a direct or an indirect question interpretation. The two interpretations are distinguished by the position of the relative TAM. If the relative TAM surfaces in the left periphery of the main clause, this gives rise to a direct question interpretation as in (17a). If the relative TAM occurs in the embedded clause, the construction is interpreted as an indirect question (17b).

(17) a. eye øntɔan e-tetɔ-tʃɔ ømmo-s ero-i [tʃe ang nim]?  
Q you(-PL) REL(-PRES)-2PL-say DO-3FS about-1.S COMP I who
‘who are you saying of me that I (am)?’ (Mark 8:29)
b. ømpɛ-f- tʃoo-s [tʃe ønt-a-f-kaa-f tɔn ]
NEG.PF-3MS-say-3FS COMP REL-PF-3MS-place-3MS where
‘he did not tell where he had put it’ (Apoph. Patrum, Charîne no. 235, 65:18)

The data considered thus far demonstrate that in Hausa wh-movement leaves a ‘footprint’ in the form of relative aspect marking. Given that Hausa special inflection can be characterised as the morphology of extraction, a question naturally arises concerning precisely how special inflection is conditioned in Coptic, where the questioned constituent appears in situ in exactly the same syntactic position as in the corresponding declarative clause.

3. Focus constructions
This section examines the morpho-syntactic parallels between wh-questions and focus constructions. We will also show that focus constructions in both languages can be associated with different semantic interpretations (new information and contrastive focus, among others).

3.1. Parallels between wh-questions and focus constructions
The morphosyntax of declarative focus structures in both languages is entirely parallel to that of wh-questions. Firstly, both constructions are flagged by relative TAMs. Secondly, in Hausa the
focus/wh-phrases occupy the same left-peripheral position, while their Coptic counterparts remain in situ. Thirdly, Hausa focus/wh-phrases can both be followed by the focus-marking copula.\footnote{12}{For more details on the structural analogy between wh-questions and focus constructions see Newman (2000: 192-3); Jaggar (2001: 499-501); Jaggar (in press (a)); Green (2006); Green and Jaggar (2003) for Hausa, and Layton (2000: 356-9) and Reintges (2004a: 253-5) for Coptic.}

**Subject focus**

(18) a. *Mūsā dà Audù nē sukà zō*
Musa and Audu FM.PL 3PL.REL.PF come
‘MUS A AND AUDU came’\textsuperscript{11} (Jaggar 2001: 500)

b. *eye ere pe n-het hobas ero-n an pe*
Q REL(-PRES) DEF.MS.1PL-heart be.covered for-1PL NOT COP.MS
‘is OUR HEART not covered for us?’ (Luke 24:32)

**Indirect/prepositional object focus**

(19) a. *Audù nē na nūnà wà gōnà*
Audu FM.M 1s.REL.PF show 1OM farm
‘I showed the farm to AUDU’\textsuperscript{11} (adapted from Jaggar 2001: 500)

b. *pē-tšœis e-i-šone e-pa-hepar*
DD.MS-lord REL(PRES)-1S-be.sick at-DD.MS.1SG.liver
‘Lord, I am suffering FROM MY LIVER.’\textsuperscript{C} (Budge, Martyrd. 208:30)

**Adjunct PP focus**

(20) a. *dà sāndā nē sukà dōkē shi*
with stick FM.M 3PL.REL.PF beat 3MS
‘they beat him WITH A STICK’\textsuperscript{11} (Jaggar 2001: 501)

b. *e-n-na-utšai hitān pō-tem-ṣp-āk*
REL(PRES)-1PL-GO-be.saved through DD.MS-DO.NOT-count(-INF)-2MS
‘we will be saved BY NOT ESTEEMING YOU YOURSELF’\textsuperscript{C} (Apoph. Patrum, Chaîne no. 271, 83:21)

### 3.2. New information versus exhaustive listing focus

The syntactic parallels between wh-questions and focus constructions suggest that the latter, like wh-constructions, are most insightfully analysed as another instance of an operator-variable construction. Indeed, in early generative analyses of focus (Chomsky 1971; Jackendoff 1972), it was argued that wh-questions and focus constructions are characterised by the same type of presuppositional skeleton, where the focus constituent provides a value for the variable contained by the presupposition.

Focus is not a unitary semantic phenomenon, however, but can be subdivided into different types that serve different interpretive goals. A distinction widely assumed in the literature is that between new information focus and exhaustive listing focus, which subsumes contrastive focus
(see, among others, Kuno (1972); Szabolcsi (1981); Rochemont (1986); Lambrecht (1994); É. Kiss (1998)). New information focus introduces a constituent into the discourse, which corresponds to the element of information that is unpredictable from the preceding discourse. Exhaustive listing focus specifies an exhaustive set of which the proposition holds true, and excludes other possibilities. The prototypical syntactic frame for exhaustive listing focus is the ‘not X but Y’ (or ‘X, not Y’) construction, which provides a straightforward way of rejecting a previous utterance and offering an alternative specification of the variable (Horn 1989: 402; Erteschik-Shir 1997: 120; Herburger 2000: 29-34). This is exemplified in the following discourse fragments.

Contrastive focus (not X but Y)

(21) A. kun sâyi baƙâr mîtâ?
 2PL.PF buy black.of car
  ‘did you buy a black car?’
B. a’â, faraƙ mîtâ mukâ sâyâ (bà baƙâ ba)
  no white.of car 1PL.REL.PF buy NEG black NEG
  ‘no, it was a white car we bought (not a black one)’

Exhaustivity may be specified overtly by restrictive focus adverbs, such as kawâi ‘only’ in Hausa and ômmate ‘only, just’ in Coptic Egyptian. As described by König (1991), the exclusive focus particle implies a scale of expectations upon which the exhaustively specified focused constituent is ranked low, giving rise to a counter-expectational reading.

Exhaustive listing focus with restrictive focus particles and adverbs

(23) a. ban dâ nî, ita kawâi cê ta zô ajî
  apart from 1S 3FS only FM.F 3FS.REL.PF come class
  ‘apart from me, ONLY SHE came to class’
  (adapted from Jaggar 2001: 504)
b. me e-k-na-kaar-t ônsô-k etôô u-hôô ômmate?
  Q RELI-(FUT)-2MS-AUX-put-1S behind-2MS for INDEF.s-thing only
  ‘would you abandon me BECAUSE OF ONE THING ONLY?’
  (Acts Andrew & Paul 200:81)
Question-answer pairs are standardly used as diagnostic tools for identifying the new information focus within a clause (see Halliday 1967; Horvath 1986; Rochemont & Culicover 1990).

New information focus (question-answer pairs)

(24) Q: wâ kukà ganî à kâsuwâ?  
   who 2PL.REL.PF see at market  
   ‘who did you see at the market?’$^\text{H}$  
A: yârônkà mukà ganî  
   boy.of.2MS 1PL.REL.PF see  
   ‘It was YOUR BOY we saw.’$^\text{H}$ (Jaggar 2001: 494)

(25) Q: eɓeek e-tôn  
    REL(-PRES)-2FS-come$^{\text{STAT}}$ to-where  
    ‘where are you going to?’  
A: eɓeek eɓoɗopos on Apa Mena antaɓeel  
    REL(-PRES)-1S-come$^{\text{STAT}}$ to-DD.MS-shrine of Apa Mena CONJ.1S-pray  
    ‘I am on my way to the SHRINE of APA MÊNA to pray.’ (Mena, Mirc. 27$^\text{b}$:22-25) $^\text{C}$

In Rooth’s (1992) theory, the type of focus that is introduced in question-answer pairs is not fundamentally distinct from exhaustive listing focus. According to this view, focus in an answer evokes a set of alternatives that qualify as potential answers in the context of the question. In doing so, it marks a contrast between the asserted answer and other potential answers. A different stance is adopted by É. Kiss (1998), who argues that only exhaustive listing focus involves an operator-variable dependency. The fact that Hausa employs overt movement both in exhaustive contexts and in question-answer pairs favours an analysis along the lines of those developed by Jackendoff (1972) and Rooth (1992).

However, there is evidence that the focus fronting strategy in Hausa is not compatible with a particular subcase of new information focus, namely PRESENTATIONAL focus, wherein a new discourse referent is introduced ‘out of the blue’ as in (26a) (Green and Jaggar 2003). Presentational focus differs systematically from the new information focus that occurs in question-answer pairs in that it presents information that is not construable from the previous context. In Coptic, the in-situ focus strategy is compatible with presentational focus. Since (26b) occurs at the beginning of a new narrative, it represents an ‘all new’ sentence that has no link to the previous context. (The symbol $^\#$ indicates that this construction is not acceptable in the given context, rather than identifying an ungrammatical construction).

Presentational focus (out-of-the-blue context)

(26) a. # faraŋ motâ (cē) mukà sâyâ  
    white.of car (FM.F) 1PL.REL.PF buy  
    ‘we bought a WHITE CAR.’$^\text{H}$
b.  uğhello ʊ-an-anakhorites econdantëf ammu ʊ-an-diakonistes
INDEF.S-elder of-hermit REL-have-3MS there DO-INDEF.S-deacon
[ eʊweh han ʊ-time ]
REL(-PRES)-3MS-live in INDEF.S-village
‘a venerable hermit who had a deacon that lived in a (certain) village.’
(C. Apoph. Patrum, Chaîne no. 99, 22:9-10)

Two conclusions can be drawn from the foregoing discussion. Firstly, it is clear from the data considered so far that declarative focus constructions pattern together with wh-questions in Hausa and Coptic, both with respect to extraction patterns and to the obligatory presence of special inflection. Secondly, ex-situ focus in Hausa and in-situ focus in Coptic are compatible both with new information and exhaustive listing interpretations. The availability of different semantic types of focus is unexpected under the analysis of É. Kiss (1998), according to which there is a strict form-function correlation in the syntactic realisation of focus in some languages.  

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13 Special inflection is not restricted to contexts in which phrasal units are focused, but is commonly used to mark a sequence of telic events that indicate progress on the time-axis (‘narrative use’). Such event chains therefore belong to the foregrounded portions of the narrative discourse (Reinhart 1984).

(i) a. na kasa maa buđ’e kofa saboda na gigicë, duk
1S.REL.PF be.unable even open door because 1S.PF panic all
na zata duk sun riga sun mut. Na buđ’e ...
1S.PF think all 3PL.PF do.across 3PL.PF die 1S.REL.PF open
‘I couldn’t even open the door because I’d panicked, I thought that they had all died already. I opened…’
(Jaggar, in press (b): (45))

b. ant-a pa-hai mu e-a-f-ti ʊ-an-u-k’oeile ʊante
REL.PF-DD.MS.1S-husband die REL.PF-3MS-take DO-INDEF.S-deposit of
wa awo ampe-f-tsoo-s e-f-na-mu [tše someone and NEG.PF-3MS-say REL(-FUT)-3MS-AUX-die COMP
ant-a-f-kaa-f tən] (...) REL.PF-3MS-put-3MS where
‘(why do you (woman) cry all the time?) My husband died and he took a deposit from someone and
didn’t tell when he was going to die where he had placed it (…’
(C. Apoph. Patrum, Chaîne no. 235, 65:22-24)

For Hausa, Jaggar (in press (b)) argues that the relative perfective (the ‘focus perfective’) has the function of highlighting or foregrounding a new event or a series of events in a narrative sequence, against the context provided by the preceding discourse. In the Coptic example, the narrative use of relative aspects can be subsumed under the label of ‘anticipatory focus’: the opening sequence of a narrative unit that introduces a leitmotiv that is elaborated upon in the subsequent discourse (Reintges 2003: 369-70). The question that arises here is whether the narrative use of relative aspects registers the presence of an operator-variable dependency. Since there is no overt wh- or focus operator, an analysis along these lines would entail a null operator analysis. Tuller (1986: 117) sketches an analysis along these lines, wherein narrative uses of relative aspect marking are related to the presence of a null focus operator that specifies the clause.
4. The typological profile of Hausa and Coptic special inflection

The use of a specialised inflectional morphology is attested cross-linguistically as one of the options for the structural encoding of features associated with classical wh-constructions (relative clauses, wh-questions, declarative focus sentences) (see Hyman & Watters (1984), Haïk (1990), Watanabe (1996) and Chung (1998) for representative studies). Reintges, LeSourd, and Chung (2006) identify a set of parameters of variation including the location, syntactic distribution, and single vs. multiple occurrence of special inflection.

A. LOCATION. The morphology of special inflection is associated with a restricted set of syntactic heads. According to Zaenen (1983), this type of morphology surfaces on verbs, inflectional heads or left-Peripheral heads such as complementisers.

In Chamorro, a Western Austronesian VSO language, relative clauses, wh-questions, and focus constructions trigger special inflectional morphology on the finite verb as well as on alternating complementisers. In Chung’s comprehensive (1998) study of Chamorro syntax, these agreement patterns are labelled WH-AGREEMENT and OPERATOR-C AGREEMENT respectively. Wh-agreement registers the case of the variable created by wh-movement while operator-C agreement indicates the categorial features and the thematic content of the moved operator in the specifier position of C. Compare the simple declarative clause in (27a), in which the clause-initial verb appears in its neutral form, with the constituent questions in (27b)-(27d), where the wh-interrogative phrase has moved overtly to the left of the verb. In (27b), the nominative case of the moved wh-subject is flagged by the wh-agreement morpheme –um-, while the objective case of the wh-object is registered by the wh-agreement morpheme -in- plus possessor agreement -nña in (27c). In (27d), the C⁰ element ni is in a local (specifier-head) relationship with the left-adjacent wh-phrase manu ‘where’ and registers both its nominal features and its locative semantics. Note that wh-agreement has no surface realisation in (27d).

**Chamorro special inflection on V and C**

(27) a. ha-fa’gasi si Juan i karëta. (neutral declarative clause)
   AGR-wash DD Juan DD car
   ‘Juan washed the car.’

b. hayi fuma’gasi i karëta? (wh-agreement; wh-subject)
   who WH[nom].wash DD car
   ‘who washed the car?’

c. hafa fina’gése-nña si Henry pâra hagu? (wh-agreement; wh-object)
   what WH[obl].wash.PROG-AGR DD Henry for you
   ‘what is Henry washing for you?’ (Chung (1998: 236, (52)-(53a-b))

d. manu ni mañ-àsaga siha? (operator-C agreement, wh-adverb)
   where? COMP Q AGR.live.PROG they
   ‘where are you living?’ (Chung (1998: 58, (80a))

The Hausa pattern corresponds broadly to the two types of special inflection in Chamorro. Thus, Hausa relative aspects are on a par with Chamorro ‘wh-agreement’, while the focus copula can be related to Chamorro ‘operator-C agreement’.
Hausa wh-questions with relative TAM and focus copula

(28) \(\text{wàcè rìgà cè sukà saya à kàsuwà?}\)
which gown FM.F 3PL.REL.PF buy at market
‘which gown did they buy at the market?’

The Coptic pattern roughly corresponds to operator-C agreement in Chamorro as far as the left-peripheral location of special inflection is concerned. At the same time, Coptic differs from Chamorro in that the left-peripheral head does not reflect categorial properties of the linked focus/wh-in-situ phrase. Instead, the allomorphic variation of relative markers in Coptic is triggered by the form of the associated TAM marker (§1.1).

Coptic complementiser allomorphy in wh-in-situ questions

(29) a. \(\text{e-sha-u-ør u an-hûb am-peim-ma?}\)
REL-HAB-3PL-make what of-thing in-DEM.MS-place

b. \(\text{ant-a u bûk e-pe.k-het?}\)
REL-PF what come to-DD.MS-2MS-heart
‘What has come into your heart?’ (Apophth. Patr. Chaîne no. 139, 31:7)

B.) SYNTACTIC DISTRIBUTION. Cross-linguistically, special inflection prototypically flags classic wh-constructions, but may have a wider distribution, extending to temporal adverbiacl clauses, conditionals and narrative uses.

Modern Irish is an example of such a language. A salient feature of Irish wh-constructions is the presence of alternating complementiser particles. The COMP-particle \(aL\) occurs when wh-movement leaves a gap, while its counterpart \(aN\) occurs in wh-dependencies terminating in a resumptive pronoun (McCloskey 1979; 1990; 2001).14 Of particular interest here is the fact that the COMP-particle \(aL\) conditions the appearance of a special form of verb inflection in present and future tenses. This special inflection (the WH-form in McCloskey’s (2001) terminology) has a broad syntactic distribution, appearing in relative clauses (30a), wh-questions (30b), and temporal subclauses (30c).

Irish wh-constructions with both COMP-particle \(aL\) and WH-form

(30) a. \(\text{an chéad amhrán eile [a bheas agann]}\)
the first song other COMP.aL be [FUT-WH] at-us
‘the next song we’ll have’

b. \(\text{cà h-uair a thiocfas tú ’na bhaile?}\)
what time COMP.aL come[FUT-WH] you home
‘when will you come home?’

14 The abbreviations \(aL\) and \(aN\) reflect the fact that the former complementiser induces lenition on the adjacent verb, whereas the latter induces nasalisation on the initial segment of a following verb. Complementiser alternations are subject to dialect variation (McCloskey (1990: 242-3, fn.7; 2001: 68, fn.2)).
c. nuair a bios daoine tinn
when COMP.aL be [PRES-HABIT-WH] people sick
‘when people are sick’ (McCloskey 2001:72).

Relative TAMs in Hausa and Coptic occur in conditional clauses as well as in various types of temporal adjunct clauses, which have relative clause syntax. The Hausa time-indicating nominal lökácín functions as the antecedent (Bagari (1976); Tuller (1986: 112-116); Jaggar (2001: 606-608)). It is also plausible to analyse such temporal sub-clauses in Coptic as cases of relative clauses with covert time-indicating nominals (‘the time when’).

**Hausa and Coptic temporal adjunct clauses with special inflection**

(31) a. lökácín dà mukà gan shì yanà zàune bàkin hanyà
time.DD COMP 1PL.REL.PF see 3MS 3MS.IMPF sit/stat side.of road
‘when we saw him, he was sitting by the side of the road’† (Jaggar 2001: 627)
b. [etei e-n-hmoos], a-f-ti pe-f-woi ero-i
still REL(-PRES)-1PL-sit PERF-3MS-give DD.MS.3MS-way to-1S
ankì u-presbyteros an-hallo (…)
FM INDEF.S-priest of-senior
‘when we were sitting, an old priest came forth towards me (…)’ C (Abbatôn 228:13-15)

C.) **RECURSIVENESS.** In long-distance *wh*-movement across clause boundaries, special inflectional may surface on *every* designated head in the path of extraction, or only on the highest designated head in the path of *wh*-movement.

As illustrated by (32a), Chamorro *wh*-agreement inflection surfaces on every verbal head, while operator-C agreement appears only on the highest complementiser (32b).

**Chamorro long-distance *wh*-questions and relatives with multiple occurrences of *wh*-agreement**

(32) a. hayi sinangane-nña si Juan malago'-nà pàra u-bisita__i?
‘who did Juan tell (us) that he wants to visit?’ (Chung 1998: 211, (8a))
b. amanu na ha-tagú’ si Dolore i lahi-nña [pàra u-tohgi ]?
where? COMP0 WH[OBJ2].AGR-order Dolores the son-AGR FUT AGR-stand
‘where did Dolores tell her son that he should stand?’ (Reintges, LeSourd & Chung, in press)

In both Hausa and Coptic, special inflection appears only on the highest designated functional head in cases of long-distance extraction (33).\(^\text{15}\)

\(^{15}\) Tuller (1986: 120) observes that while this generalisation holds for most Hausa speakers, some speakers permit special inflection to surface on every inflectional head in the path of movement. (This appears to represent a case of dialect variation, since most speakers of Standard (Kano) Hausa do not produce such constructions, but Tuller is not precise about the relevant dialect(s)): 
Hausa and Coptic special inflection in long-distance constituent questions

(33) a.  wàcè  yàrînyà  ka  cè  tà  ràsu?
   which(F) girl  2MS.REL.PF say  3FS.PF die
   ‘which girl did you say had died?’

b. eye  antotan  e-tetan-tšô  ammo-s  ero-i  [tšè  ang  nim]?
   Q  you(-PL)  REL(-PRES)-2PL-say  DO-3PS  about-1S  COMP  I  who
   ‘who are you saying of me that I (am)?’ (Mark 8:29)

As far as we know, these are the only attested typological options: in long-distance wh-dependencies, either each step of the movement derivation leaves a footprint in the form of special inflection or complementiser alternations, or only the final step of that derivation is so marked. Table 4 summarises the typological patterns discussed in this section.

<table>
<thead>
<tr>
<th>WH-AGREEMENT</th>
<th>OPERATOR-C AGREEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SUCCESSIVE-CYCLIC</td>
</tr>
<tr>
<td>Chamorro</td>
<td>+</td>
</tr>
<tr>
<td>Irish</td>
<td>+</td>
</tr>
<tr>
<td>Hausa</td>
<td>–</td>
</tr>
<tr>
<td>Coptic</td>
<td>–</td>
</tr>
</tbody>
</table>

Table 4. The typological profile of special inflection

In sum, Hausa relative aspects encode the person, number and gender features of the moved wh-phrase in subject questions, while the focus copula agrees in number and gender with the focus/wh-constituent to its left. In this respect, Hausa is unusual because very few of the known special inflectional patterns are sensitive to the featural content of the moved operator. In Coptic, special inflection appears in a position higher than the surface position of the focus/wh-phrase. In this respect, Coptic relative TAMS can be compared with Chamorro operator-C agreement, yet in terms of paradigmatic morphology, they are clearly related to Hausa relative aspects, since the form of special inflection is contingent on the selected TAM marker. From this perspective, both wh-agreement and operator-C agreement are conflated in Coptic relative TAMS.

5. Wh/focus constructions without relative TAMS

Hausa and Coptic both have access to alternative strategies for wh-questions and focus in which relative TAMS are prohibited. The availability of focus/wh-in situ in Hausa was first explicitly described by Jaggar (2001; in press (a)), and Green and Jaggar (2003). Coptic can be classified as an optional fronting language, in which focus/wh-fronting and focus/wh-cleft constructions

(i) mè  sukà  cè  yàrà  sun  (sukà)  sàyà?
   what  3PL.REL.PF say  children  3PL.PF (3PL.REL.PF) buy
   ‘what did they say the children bought?’ (Tuller 1986:120)
are available as marked alternatives to the canonical focus/\textit{wh}-in situ pattern. We describe some of these alternative focus/\textit{wh}-strategies in Hausa and Coptic as ‘marked’ in the sense that they are less frequently attested.

5.1. \textit{Wh-in situ} in Hausa

The considerable inter-speaker variation in Hausa with respect to the acceptability of \textit{wh}-in situ does not appear to be conditioned by dialect differences, since judgements vary from one speaker to another from the same dialect area. However, all speakers accept \textit{wh}-in situ as echo questions (Jaggar 2001: 523). In addition, all speakers accept \textit{wh}-in situ in locative and possessive constructions of the following kind.

\textit{Locative/possessive \textit{wh-in situ}}

\begin{enumerate}
\item a. \textit{sunà \textit{inà} ýà\textit{ñzu}?}
   \textit{3PL.IMPF where now}
   ‘where are they now?’ \textsuperscript{H} (Jaggar 2001: 522)
\item b. \textit{kùn à \textit{dà} \textit{mè}?}
   \textit{2MS.PERF with what}
   ‘what do you have?’ (Newman 2000: 494)
\end{enumerate}

The third point of consensus among speakers concerns the ungrammaticality of \textit{wh}-subjects in situ (35). Recall from the discussion of Hausa \textit{wh}-subject questions that relative aspects pattern together with extraction (§2.1). Therefore, example (35) must be analysed as \textit{wh}-in situ (Green and Jaggar 2003).

\textit{Ungrammaticality of \textit{subject question}}

\begin{enumerate}
\item (35) *\textit{su-wà} \textit{sun sàyì ba\textit{fàr} mò\textit{tà}?}
   \textit{who(PL) 3PL.PF buy black.of car}
   ‘who (pl) bought a black car?’
\end{enumerate}

Furthermore, all speakers reject embedded \textit{wh}-in situ questions, regardless of whether they contain \textit{wh}-arguments or \textit{wh}-adjuncts (36).

\textit{Ungrammaticality of \textit{embedded \textit{wh-in situ}}}

\begin{enumerate}
\item (36) a. *\textit{Kànde tànà tsàm\textit{mànìn nà ga wà à kà\textit{suwà}}}
   \textit{Kànde 3FS.IMPF thinking 1S.PF see who at market}
   ‘who does Kände think I saw at market?’
\end{enumerate}

\textsuperscript{16} While \textit{wh}-clefting is a very common interrogative sentence pattern for argument \textit{wh}-phrases, \textit{wh}-fronting represents the ‘marked’ strategy for questioned subjects and objects. The clefting strategy equates an clause-initial focus constituent with an out-of-focus relative clause. Since clefts involve a biclausal structure, they fall outside the scope of the present paper. For discussion, see Reintjes, Liptak and Cheng (2006).

\begin{enumerate}
\item a. \textit{nim, pe [\textit{ànt-a-f-tù\textit{kk}e \textit{ùm-mo-u \textit{ùm-pei-ma}]}?}
   \textit{who COP.MS REL.PF-3MS-plant DO-3PL in-DEM.MS-place}
   ‘who is it that planted them (the trees) here?’ (Budge, Martyr. 219:20-21)
\end{enumerate}
b. *Kändë tanà tsàmmànìn nà jë inà
Kändë 3FS.IMPF thinking 1S.PF go where
‘where does kände think I went?’
c. * Kändë tanà tsàmmànìn nà sàyì littàfin kàmàñ nàwà à kàsuwà
Kändë 3FS.IMPF thinking 1S.PF buy book.DD for how.much at market
‘how much does Kändë think I bought the book for at market?’

For those speakers who accept wh-in situ, there is strong evidence of an argument-adjunct asymmetry, where wh-adjuncts are more widely acceptable in situ than wh-arguments.

**Hausa non-argument wh-in situ**

(37) a. sunà fitòwà dàgà inà?
3PL.IMPF come.out.VN from where
‘where are they coming out from? (Newman 2000: 496)
b. yà tàfì yàùshè?
3MS.PF go when
‘when did he go?’ (Newman 2000: 496)
c. nà gayà makà såwà nàwà?
1S.PF tell 2MS.IO time how.many
‘how many times have I told you?’ (Jaggar 2001: 523)

However, wh-object questions are accepted by some speakers in contexts that introduce a strong presupposition, for example where a set of discourse referents has been introduced and this set is narrowed down by the question. Chang (1995) describes this type of question as ‘detail-seeking’. Upper case A and B indicate a dialogue pair.

**Wh-in-situ object: detail-seeking questions**

(38) A. duk mun ga mutànnèn can
all 1PL.PF see people.DD there
‘we saw all the people there’
B. kun ga wà dà wà
2PL.PF see who and who
‘who (pl) did you see?’ (Jaggar, 2006 (a) (5))

(39) A. jiyà nè dà na ci àbìnci sai na mànçè kàyànà
yesterday FM.m when 1S.REL.PF eat food then 1S.REL.PF forget things.1S
‘it was yesterday when I’d eaten I forgot my things’
B. kin màntà wàñè kàyà?
2FS.PF forget which things
‘which things did you forget?’ (Jaggar, 2006 (a) (8))

In contexts that introduce a weaker presupposition, wh-in-situ objects are degraded. For example, in the following exchange speaker A and speaker B are looking in a shop window, but A’s utterance does not strongly presuppose that B intends to purchase anything.
Neither are *wh*-in situ object questions acceptable when used as paraphrases of alternative questions, despite the fact that this context involves a strong presupposition. In the following exchange, A and B know that there are two men who want to marry Aisha. A and B discuss the situation, then B wonders, hoping that A may know the answer:

(41) A. Mūsā dà Audù dukà sunā sòn Aishà, Musa and Audu both love Aisha
sunā kuma sō sū òùrē tà 3PL.IMPF and want VN 3PL.SUBJ marry 3fs
‘Musa and Audu both love Aisha, and they want to marry her’
B. *Aishà zā tā òùrī wà?
Aisha marry who
‘who will Aisha marry?’

Finally, observe that even non-argument *wh*-in-situ questions like those in (37) are degraded when the *wh*-adjunct is preceded by a quantificational expression (42), or by negation (43B).

*Intervention effects in Hausa *wh*-in situ*

(42) *kōwānè yārò yā zō dāgà ìnà?
each boy come from where
‘where does each boy come from?’

(43) A. nā jè kō’ ìnà, yàù! Nā jè jəmì’ār, nā jè kāsùwà,
1S.PF go everywhere today 1S.PF go university DD 1S.PF go market
nā kuma jè asibiti
1S.PF and go hospital
‘I’ve been everywhere today! I’ve been to the University, I’ve been to market, and I’ve been to hospital’
B. *bà kà jè ìnà ba?
NEG 2S.PF go where NEG
‘where haven’t you been?’

These intervention effects provide further evidence for the restricted nature of *wh*-in situ in Hausa.
5.2. Wh-fronting in Coptic

As in Hausa, the marked wh-fronting strategy in Coptic is more common for wh-adverbials, which cannot be clefted (Reintges 2004b).

Absence of argument-adjunct asymmetries in wh-fronting

(44) a. nimti a-f-tent-sk e-peï-ma? (wh-subject)
   who PF-3MS-bring-2MS to-DEM,MS-place
   ‘who brought you here?’ (KHML I 3:7-8)

b. u seöf wa eroö (wh-object)
   what (PRES)-3PL-speak malice against-1S
   ham p-e-ti-sap hamot anok haro-f
   in DD,MS-REL(-PRES)-1S-take grace I for-3MS
   ‘in what can they speak maliciously against me because of that for which I give thanks (lit. take grace)?’ (1 Cor. 10:30)

c. eßol tön a-tetan-ei e-peï-ma? (wh-adverb)
   PCL where PF-2PL-come to-DEM,MS-place
   ‘from where did you come here?’ (Budge, Martyrd. 220:8)

d. ša ta-nau ka-fi am-pe,n-het? (wh-adverb)
   until DD,FS-hour (PRES)-2MS-carry DO-DD,MS.1PL-heart
   ‘Until when (lit. the hour) are you carrying our heart?’ (John 10:24)

There are thus a number of characteristics that unite the marked wh-constructions in Hausa and Coptic Egyptian. Most prominently, the general rather than the relative form of the inflection word is selected. In addition, both languages display a preference for non-arguments in the marked option. 17

5.3. Focus constructions

The parallelism observed between focus and wh-constructions in the canonical strategy begins to break down in the marked strategy. This is particularly evident in the case of Hausa, where focus in situ is considerably more widespread than wh-in situ (Jaggar, in press (a)). For example, Hausa requires in-situ subject focus in presentational (out-of-the-blue) contexts (45a), despite the fact that subject wh-/focus in situ is never licensed in other discourse contexts (cf. example

17 The cause adverbials like ahro-k ‘what is the matter with, why’ in (ia) and the borrowed Greek wh-adverbial pòs ‘how come, why’ in (ib) below are only attested ex situ, which does not appear to be a random gap in the data, but rather a grammaticality restriction (see Rizzi 1990: 46-8 for a discussion of the obligatorily ex situ position of French pourquoi ‘why’). In Coptic, therefore, there are both interpretive and distributional asymmetries relating to the patterning of adverbial wh-expressions.

(i) a. ahro-k a-k-tamio-i an-tei-he?
   why-2MS PF-2MS-create-1S in-DEM,FS-manner
   ‘why have you made me thus?’ (Roman 9:20)

b. pòs a nai ño-pee ñmmo-s
   how PF DEM,PL happen to-3FS
   ‘how did these (things) happen to her?’ (Pistis Sophia 42:10-11)
In Coptic, focus fronted subjects can be presentational, although this represents a marked option.

**Presentational subject focus**

(45) a. ì®lbì®shì®rinì®kà, bà®í®tn sun isó
    good news.of.2MS guests.DD 3PL.PF arrive
    ‘guess what? THE GUESTS have arrived!’\textsuperscript{H} (Green & Jaggar 2003: 211)

   b. son snau kata sarks à®í®Ì®bì®ek ì®lì®hì®nì®eete
    brother two concerning flesh PF-3PL-go to-INDEF.S-monastery
    ‘TWO BLOOD-RELATED BROTHERS went to a monastery.’\textsuperscript{C} (Apoph. Patrum, Chaîne no. 100, 22:32)

In both Hausa and Coptic, focused objects and adjuncts are attested in the marked constructions. The presentational focus interpretation is made explicit by the clause-initial interjections ì®lbì®shì®rinì®kà ‘guess what’ (lit: ‘your good news’) in Hausa, and (eì®sì®hì®eete) eì®s `look!’ in Coptic.

**Presentational object focus**

(46) a. ì®lbì®shì®rinì®kà, mun ga yà®ròÌ®nkà
    good news.of.2MS 1PL.PF sec son.OF.2MS
    ‘guess what? We saw YOUR SON!’\textsuperscript{H} (Green & Jaggar 2003: 211)

   b. eì®sì®hì®eete eì®s pa-ariston a-i-sàßòt-òf.
    INTERJ INTERJ DD.MS.1S-dinner PF-1S-prepare-3MS
    ‘Look, MY DINNER, I have already made it.’\textsuperscript{C} (Matthew 22:4)

Recall that question-answer pairs provide a standard diagnostic for new information focus. The first observation is that, in Hausa, subjects are not licensed in situ in this type of new information context. In this respect, subjects contrast with presentational subjects in situ, and with objects in situ across the board. Compare the question-answer pair in (47) with (48). In the Coptic question-answer pair in example in (49), the left-peripheral nominal Jesus ‘Jesus’ is identified as new information focus.

**New information focus (Q-A pair)**

(47) Q: su-wà sukà tàfi Amì®rkà?
    3PL-who 3PL.REL.PF go America
    ‘who (pl) went to America?’\textsuperscript{H}

   A: su Audù dà Mùßà sukà (*sun) tàfi
    3PL Audu and Musa 3PL.REL.PF (3PL.PF) go
    ‘AUDU AND MUSA went’ (adapted from Green & Jaggar (2003: 197))\textsuperscript{H}

(48) Q: wàÌ®Ì®nè kà®Ì®yà kì®kà mòntà?
    which things 2FS.REL.PF forget
    ‘which things did you forget?’\textsuperscript{H}
A: nà mâncë jàkàtà dà hùlùtà
1S.PF forget bag.of.1S and hat.of.1S
‘I forgot my BAG AND MY HAT’ (Green & Jaggar 2003: 197)\(^H\)

(49) Q: nim₁ a-f-ent-ək e-pei-ma?
who PF-3MS-bring-2MS to-DEM.MS-place
‘who brought you here?’ \(^C\)
A: Jesus₁ a-f-ent e-pei-ma
Jesus PF-3MS-bring-1S to-DEM.MS-place
‘JESUS brought me here.’ (KHML I 3:7-8) \(^C\)

The following set of examples illustrates that the marked strategy can also be used to encode contrastive focus. As expected, Hausa contrastively focused subjects are not licensed in situ in such contexts.

**Contrastive focus (‘not X but Y’)**

(50) A: kà aikà dà takàrdàr?
2MS.PF send with paper.DD
‘did you send the paper?’
B: ä’À, nà aikà dà littàfin nè, bà takàrdàr ba
no 1S.PF send with book.DD FM.M NEG paper.DD NEG
‘no, I sent THE BOOK, not the paper’ \(^H\) (Green & Jaggar 2003: 196)

(51) ønt-a pai šøpe an etbeet
REL-PF DEM.MS happen NEG because.of-1S
alla etbe te-khera män neï-orphanos a pà-nute eire
but for DD.FS-widow and DEM.PL-orphan PF DD.MS-GOD-god do
əm-pei-hoß
DO-DEM.MS-thing
‘this (miracle) happened not FOR MY SAKE, but for the sake of the widow and these orphans has God done this thing.’ \(^C\) (Apoph. Patrum, Chaîne no. 225, 65:31-32)

As Newman (2000: 190) points out, Hausa focus in situ (although he does not use this term) can also be licensed by the focus-sensitive particle *sai* ‘only’. The Coptic equivalent of this particle is Ḥmmate.

**Contrastive focus in situ with restrictive focus particle ‘ONLY’**

(52) a. bà mà sôn kômë sai kudî
NEG 1PL.IMPF want.VN.of nothing only money
‘we don’t want anything except MONEY’\(^H\) (Newman 2000:190)

b. pai Ḥmmate ti-wëiß-eime ðnte-tûtûn
DEM.MS only (PRES-1S-want-know from-2PL
‘this (thing) only I want to learn from you (...)’\(^C\) (Galatians 3:2)
In sum, both the focus in situ strategy in Hausa and the focus-fronting strategy in Coptic are compatible with different types of focus. Therefore, there is no evidence for a strict form-function correlation between syntactic strategy and focus interpretation.

5.4. Interim summary: the mirror image pattern
The following points can be concluded as a result of this close comparison between Hausa and Coptic focus/wh-constructions:

(i) *Special inflection is not clause-typing* in the sense of Cheng (1991). The fact that special inflection appears not only in *wh*-interrogatives but also in relative clauses and declarative focus constructions shows beyond doubt that it is not a lexicalised focus/question morpheme.

(ii) *The semantic nondistinctness of focus ex situ and focus in situ.* This descriptive comparison has established that there is limited evidence in either language for any one-to-one mapping between morphosyntactic focus structure and focus interpretation: marked and unmarked strategies occur in both new information and exhaustive/contrastive contexts.

(iii) *Special inflection and wh-extraction.* In the syntactic literature, special inflection has often been described as the morphology of extraction (e.g. Zaenen 1983; Georgopoulos 1991; Haïk 1990; Hukari & Levine 1995; Chung 1998). This raises a question concerning the extent to which such a view can be maintained, given the Coptic pattern, where special inflection co-occurs with focus/wh-in situ.

In registering operator-variable dependencies, Hausa and Coptic relative TAMS bear direct evidence for the naturalness of these constructions as one class. Yet, the evidence also shows that operator-variable constructions are not automatically flagged by this specialised morphology. In Hausa, focus/wh-fronting requires relative aspect marking, while it is prohibited in the corresponding Coptic structures. Conversely, relative aspect marking is blocked in Hausa focus/wh-in-situ constructions, but obligatory in Coptic. Thus, Hausa and Coptic are the ‘mirror-image’ of one another with respect to the syntactic conditioning of special inflection (Green and Reintjes 2004; Reintjes and Green 2004). Table 3 below provides a summary of the distributional patterns (+ indicates the presence and – the absence of relative TAMS).
6. Mapping the left periphery in Hausa and Coptic

In this section, we map out the basic clause structure of Hausa and Coptic, paying particular attention to the structure of the left periphery (Rizzi 1997). In both languages, focus/wh-fronting targets a single focus projection that is located below the force indicating complementiser node and above the inflectional domain. In Hausa, a movement analysis for focus/wh-fronted phrases can be motivated on the basis of significant differences between these constructions and topic constructions, where both involve left-peripheral positions. As shown by the grammaticality contrast between (57a) and (53b)-(53c), multiple topics are possible, but not multiple focus/wh-phrases. This shows that there is only one available operator position. Further note that topic structures do not trigger relative aspect marking, and show a preference for resumption. (The comma indicates an intonational break, a characteristic property of topic constructions).

Multiple topics and foci in Hausa

(53) a. àkuyàrì, kùwà, sànyì daì, yà gamà dà ità,
  goat.D. TOP-PCL cold TOP-PCL 3MS.PF finish with 3FS
  ‘the goat, well the cold, it finished it off’ (Newman 2000: 617)
b. *Àdù nè gòǹà cè zàn nùnà wà
  Aduu FM.M farm FM.F FUT.1S show IOM
  ‘I’ll show THE FARM to AĐU’ (adapted from Jaggar 2001: 500)
c. *wà Nàndë cè tàkè sò?
  who Kande FM.F 3FS.REL.IMPF love.VN
  ‘who does KÀNDE love?’

As Tuller (1986: 55-7) shows, focus/wh-fronting structures are subject to locality contraints, whereas topic structures are not. For example, (54a) illustrates the sensitivity of focus fronting to island constraints: while a focus-fronted phrase cannot be extracted from an embedded question, the parallel topic structure is perfectly grammatical (54b).
Locality constraints in Hausa focus and topic structures

(54) a. *Àli (nè) mukà san [wà zài àurà ]
   Ali FM,M 1PL.REL.PF know who FUT.3MS marry
   ‘we know who Ali will marry’

b. Àli, mun san [ wà zài àurà / àurè tà ]
   Ali 1PL.PERF know who FUT.3MS marry / marry 3FS
   ‘As for Ali, we know who (he) will marry (her)’ (Tuller 1986: 55 (70)).

Green (1997, 2007) argues that the Focus Phrase (FP) is the target of focus/wh-fronting, a projection lower in the structure than CP. This analysis is suggested by the optional presence of the focus-marking copula, which can be analysed as a focus-marker that lexicalises the head of this functional phrase.¹⁸ Moreover, since preposed focus/wh-phrases can be preceded by subordinating complementisers in embedded structures, the target of focus/wh-fronting cannot be CP, as argued by Tuller (1986) (§ 2.2).

Embedded focus/wh-phrase following complementiser in Hausa

(55) a. kin san [kō ìnà sukà jë]?  
   2FS.PF know COMP where 3PL.REL.PF go
   ‘do you know where they went?’

b. mutánên sun tsayà [cèwà Kànde, cè sukè so ]
   men.DD 3PL.PF insist COMP Kande FM.F 3PL.REL.IMPF love.VN
   ‘the men insisted that it is Kande they love.’

Within the left periphery, topics and focus/wh-fronted phrases may co-occur, but the topic precedes focus/wh-phrases. The reverse order yields ungrammatical results (56).

Ungrammaticality of focus preceding topic in Hausa

(56) *wà, bàràwôn, ya kashë shì?
   who thief.DD 3MS.REL.PF kill 3MS
   ‘who, as for the thief, killed him?’

Given the facts outlined in this section, we assume the following hierarchical organisation of the Hausa clause:

¹⁸ Green (1997, 2006) demonstrates that this analysis is also consistent with focus readings in non-verbal copular sentences, in which the focus-marking copula is usually obligatory.
(57) **Hausa clause structure**

```
C'  
C   TopP  
Spec  Top'  
Top  FP  
Spec  FOCUS/WH-XP 
F'  
Spec  (subject) 
TP  
F  né/cē 
Spec  T'  
I  VP  
V   NP  
(object)  
INFL[+ REL]  
```

As observed by Tuller (1986), Hausa shows a general prohibition on the occurrence of focus/wh-phrases in subjunctive clauses (58a)-(58b), although long-distance extraction from subjunctive clauses is licensed (58c).

**Ungrammaticality of local focus/wh-fronting in Hausa subjunctive clauses**

(58) a. *nâ cē [mê yâ yì]
   *I said what he should do’ (Tuller 1986: 69)

b. *munâ fautâ [sâbuwar mōtâ cê yâ sayā manà ]
   ‘we hope he buys a NEW CAR for us’ (Tuller 1986: 70 (94c))

c. wâcê yârinâ kakê só kâ àurâ?
   which girl 2MS.IMPF want.VN 2MS.SUBJ marry
   ‘which girl do you want to marry?’ (Jaggar 2001: 577)

In line with McDaniel (1989: 573-5) and Dayal (1991a,b), we propose that subjunctive and infinitival categories represent defective tense categories that lack an articulated left periphery. Since there is no topic/focus layer above the root clause (the IP), there is no designated scope position for focus/wh-phrases to move to. In order to be interpreted, the embedded focus/wh-phrase has to move to the matrix clause. This explains why long-distance extraction from subjunctive clauses is forced, which excludes an indirect question interpretation in the case of subjunctive embedded clauses. Finally, the unavailability of a focus phrase in the left periphery of subjunctive clauses also accounts for the incompatibility between subjunctive inflection and relative aspects (§ 9).

Unlike Hausa, Coptic makes use of two positions for TAM markers, one preceding the subject and the other following it. The clause-internal position is limited to root modals (Reintges 2001).
For the purposes of this paper, we will not further explore the complex interaction between the two inflectional positions, but assume that the pre-subject TAM markers are base-generated in the FINITENESS PHRASE (FINP) dominating the IP. As with Hausa, the fronted focus/wh-phrase follows the subordinating complementiser tiš ‘that’ (59a), or the interrogative particle eye (59b), either of which can head the CP. It follows that the fronted focus/wh-phrase is located in some functional phrase below C⁰.

**Fronted wh-phrase following complementiser and Q particle in Coptic**

(59) a. ti-tšənu əmmə-tən [tšə ʔən u ən-šatšə a-tən əro-i (…)]
(PRES)-1S-ask DO-2PL COMP in what of-word PF-2PL-speak about-1SG
‘I ask you with which reason are you saying about me (…)’ (Acts 10:29)³

b. eye etšə ʔən-tənram ənsə-n
Q because.of what (PRES)-2PL-look for-1PL
‘why are you looking for us?’ (Acts 3:12)³

Topics may precede fronted focus/wh-phrases in Coptic, but unlike Hausa, they may also follow fronted focus/wh-phrases (60). As in the Hausa case, we identify the relevant projection that hosts fronted focus/wh-phrases in Coptic as the non-recursive Focus Phrase. Since the lower topic phrase hosts not only left-dislocated pronouns, as in (60b), but also preposed time adverbials, we propose that such topics are base-generated in the specifier position of the Fin(inteness) Phrase.

**Topics preceding and following focused constituents in Coptic**

(60) a. anon de etšə nən-nəşə mar-ən-opt-ən mawaa-n
we PCL because.of DD.PL.1PL-sin OPT-1PL-lock up-1PL SELF-1PL
‘(as for) us, BECAUSE OF OUR SINS, let’s lock ourselves up!’ (Apoph. Patrum, Chaine no. 41, 8:28-29)

b. ən-əs ən-he əntok kə-tšə əmmo-s [tšə tətə(n)-na-ər
in-which of-manner 2.MS (PRES)-2MS-say DO-3FS COMP FUT-2PL-AUX-make
rəmhe ]?
free.man
‘how do you say that you will become free?’ (John 8:33).

Assuming that both wh-fronted and focus-fronted phrases compete for the specifier of FP, as in Hausa, a number of gaps in the Coptic data receive a principled explanation. Thus, neither multiple focus fronting nor a combination of wh- and focus-fronting is attested. The word order facts considered thus far motivate the following hierarchical structure of the Coptic clause.
In summary, there is evidence for an articulated left periphery in both Hausa and Coptic. Where the two languages diverge is in the availability of the pre-subject position for the Coptic TAM marker, which also licenses topic phrases to appear in the post-focus position.

7. The ‘hidden’ movement configuration of Coptic wh-in situ
In the aftermath of Huang’s (1982) seminal work, comparative research disclosed an impressive amount of evidence for the diversity of wh-in-situ (e.g. Cole and Hermon 1994, 1998; Ouhalla 1996; Watanabe 2001; Cheng and Rooryck 2002; Simpson and Bhattacharya 2003). Some types of wh-in-situ do not participate in any kind of movement or movement-like relations (Reinhart 1998), while others are derived by covert phrasal movement at LF (Nissenbaum 2000; Richards 2001). Yet another type of wh-in-situ involves the separation of the operator element from the rest of the category. In recent studies, this operation is conceptualised either as null operator movement (Watanabe 1992) or as independent wh-feature movement (Cheng 2000; Cheng & Rooryck 2000, 2002; Pesetsky 2000; Soh 2004). None of the movement or movement-like relations underlies the type of wh-in-situ documented here. Elaborating the analysis developed by Reintges, LeSourd and Chung (2006), we demonstrate that Coptic wh-in-situ displays the same scope and interpretative properties as wh-fronting structures, which argues against an unselective binding approach. Since Coptic wh-in-situ does not display intervention effects, it lacks the characteristic properties of an LF operation.
7.1. Wh-movement and scope

When wh-phrase moves overtly to the right of the finite subordinating complementiser tšē ‘that’, it takes embedded scope and the entire construction is interpreted as an indirect question (62a). If the wh-phrase undergoes long-distance wh-movement across a clause boundary, it takes matrix scope and the resulting interpretation is that of a direct question (62b).

\[(62)\]
\[\begin{align*}
\text{a. } &\text{ti-tšēnu } \text{omm-č-dan } [\text{tšē } hōn \ u \ om-šatšē \ a-tetān \ ero-i (…)] \\
&\text{(PRES)-1S-ask DO-2PL COMPl in what of-word PF-2PL-speak about-1S} \\
&\text{‘I ask you with which reason are you saying about me (…)’ (Acts 10:29)}^C \\
\text{b. } &\text{en-ah } \text{en-he } \text{antok ka-tšō } \text{amm-č-s } [\text{tšē } \text{tet(h)-n-na-ør} \\
&\text{in-which of-manner 2.MS (PRES)-2MS-say DO-3FS COMP FUT-2PL-AUX-make} \\
&\text{rēmhe } ]? \\
&\text{free.man} \\
&\text{‘how do you say that you will become free?’ (John 8:33).}
\end{align*}\]

Parallel facts can be observed for embedded wh-in-situ questions. In finite complement clauses, the in-situ wh-phrase generally takes embedded scope, which yields an indirect question interpretation (63). In this context, the relative tense formative surfaces in the left periphery of the embedded clause (§ 2.2).

\[(63)\]
\[\begin{align*}
\text{e-k-sōwān } [\text{tšē } \text{ant-a-k-tśi } \text{sēo } \text{om-t€n } \text{nim } ] \\
&\text{REL-(PRES)-2MS-know COMP REL-PF-2MS-get teaching from-hand who} \\
&\text{‘you know by whom you were taught.’}^C (2 \text{ Tim. 3:14)}
\end{align*}\]

However, there are also attested examples where the in-situ wh-phrase scopes out of the embedded finite clause and the resulting interpretation is that of a direct question. When this happens, the relative tense marker surfaces at the left edge of the matrix clause (64).\(^{19}\)

\[(64)\]
\[\begin{align*}
\text{a. } &\text{ey } \text{ant-tōn } \text{e-tetān-tśō } \text{amm-č-s } \text{ero-i } [\text{tšē } \text{ang } \text{nim} ]? \\
&\text{Q 2.PL REL-(PRES)-2PL-say DO-3SG,F about-1.S COMP I who} \\
&\text{‘who are you saying of me that I (am)?’ (Mark 8:29)} \\
\text{b. } &\text{e-k-tśō } \text{omm-č-s } [\text{tšē } \text{u } \text{etβēt-ak}] \\
&\text{REL-(PRES)-2MS-say DO-3FS COMP what about-2MS} \\
&\text{‘what are you saying about yourself?’ (John 1:22)}
\end{align*}\]

A different situation obtains in infinitival wh-in-situ questions where both wh-arguments and wh-adjuncts must take matrix scope, imposing a direct question interpretation on the entire construction. Once again, relative marking occurs in the highest clause over which the wh-in-situ takes scope.

\(^{19}\)The possibility of taking matrix scope out of an embedded finite clause distinguishes Coptic wh-in-situ from its counterpart in Iraqi and Lebanese Arabic, in which tense and finiteness block the wide scope construal of the embedded wh-phrase (Wahba 1991; Ouhalla 1996; and Aoun & Li 2003).
As with Hausa subjunctive clauses, Coptic infinitivals are defective tense categories that lack a focus phrase and hence a scope position to which the in-situ wh-phrase can be moved. In order to be interpreted, the embedded wh-in-situ phrase must move to the specifier of the focus phrase in the matrix clause.

7.2. Wh-movement and interrogative interpretation
The construal of a ‘true’ question interpretation of Coptic wh-words provides further evidence for a movement analysis of the wh-in-situ pattern. As has been noted in traditional grammars (Till 1966 §232; Layton 2000 §73), wh-expressions may have a non-interrogative, indefinite reading. Consider the following triplets of examples, involving the wh-words nim ‘who’ and u ‘what’. In the (a) examples, the wh-word remains in-situ and the entire clause is flagged by relative TAM marking, receiving the same non-echo question interpretation as its fronted counterpart in the (b) examples. This contrasts with the (c) examples, where the wh-in-situ constituent assumes a specific indefinite reading. The minimal difference with wh-in-situ interrogatives concerns the absence of relative TAM marking. Further note that such a specific indefinite reading is unavailable for wh-fronting structures (Reintges 2003).

(65) a. Ⱨnt-a-tetûn-ei eûol e-t-erûmos [e-nau e-u]? 
   REL.PF-2PL-come PCL to-DD.MS-desert to-see.INF at-what 
   ‘what have you come to the desert to to see?’ (Luke 7:24) 
b. e-tetûn-wû [e-tra-ka nim nû-tûn eûol hûm pe-snau]? 
   REL(-PRES)-2PL-want to-CAUS.INF.1S-place who for-2PL PCL from DD.MS-two 
   ‘which of the two do you want me to release to you?’ (Matthew 27:21)
b. $u$ se$\hat{u}$še wa ero$\hat{u}$ h$\hat{a}$mp-p-e-ti-$\breve{s}$āp h$\hat{a}$mort
what (PRES)-3PL-speak malice against-1S in DD.MS-REL(-PRES)-1S-receive grace
anok haro-f
I from-3MS
‘what do they say maliciously against me because of the one under whom I receive mercy?’ (1 Cor. 10:30)
c. a-i-ti $u$ m$\breve{n}$ $u$ ehun e-pi-ma
PF-1S-give what and what PCL to-DEM.MS-place
‘I gave such and such a thing to this place.’ (Shenoute IV 105:16)

Since both $wh$-fronting structures and relative-marked $wh$-in situ constructions in Coptic are associated with an interrogative interpretation, there is compelling evidence for equating the co-occurrence of $wh$-in situ and special inflectional morphology with a movement configuration. To be more precise, in both the $wh$-fronting and the $wh$-in-situ pattern, the $wh$-phrase moves to the left-peripheral focus position where its scope (and hence its interpretation) is determined. But while the moved $wh$-phrase is pronounced in the target position in the ex-situ pattern, it is phonologically realized in the original position in the in-situ counterpart. By contrast, the specific indefinite interpretation of in-situ $wh$-words instantiates the non-movement option.

7.3. Absence of intervention effects
The previous discussion on scope and interrogativity raises a non-trivial question concerning the representational level at which covert $wh$-movement is operative: narrow syntax or LF. In this section, we argue against an LF movement approach to Coptic $wh$-in situ, focusing on the absence of intervention effects. Huang’s (1982) LF movement approach is conceptually appealing, since it captures the parallelism in scope and selection between Chinese-type $wh$-in-situ and English-type $wh$-fronting. In both cases, $wh$-questions are formed by movement, the main difference being the derivational timing of the movement (before or after the transfer to the phonology). In recent studies, a generalized LF-movement approach to Chinese is abandoned in favour of a diversified system, in which only $wh$-adverbials move covertly to their scope position, while $wh$-arguments bound unselectively in their original positions. This analysis accounts for argument-adjunct asymmetries in Chinese: adverbial $wh$-phrases may not take matrix scope from within an island, while nominal $wh$-phrases are free to do so (Aoun & Li (1993); Lin (1992); Tsai (1994, 1999); Cole & Hermon (1998); Cheng & Rooryck (2000)).

Since there are no argument-adjunct asymmetries in Coptic long-distance $wh$-dependencies, it is safe to assume that scope and interrogative interpretation is established via a single movement operation that applies to all instances of $wh$-in-situ. This movement lacks the characteristic properties of LF raising. In particular, it is insensitive to ‘intervention effects’: the blocking effects of quantifier/negation expressions in $wh$-in-situ constructions (Beck & Kim (1997); Pesetsky (2000)). No intervention effects are detectable in Coptic $wh$-in-situ questions, where the clause-internal $wh$-phrase can be preceded by a negative TAM (68a), a focused pronoun (68b), or a universal quantifier (68c).
Absence of intervention effects in Coptic wh-in-situ

(68) a. **ete-mpe-tōham ḥən aš əm-ma?** (negation)
   REL-NEG.PF.2FS-defile in what of-place
   ‘in which place have you (woman) not been defiled?’ (Jeremiah 3:2)

b. **tenu k’e hō e-i-na-tamie u-ēi na i ən-tō-nau?** (focus)
   now PCL.SELF.1S REL-(FUT)-1S-AUX-create INDEF.S-house for-1S in-DD.FS-hour
   ‘when will I, myself, build me a house as well?’ (Genesis 30:30)

c. **k-nau [tēs an-a-h-bal əm-pewe ter-u]** (quantifier)
   (PRES).2MS-see COMP REL-PF.3MS-establish DD.PL-heavens all-3PL
   ən-a$h ən-he ham pe.f-logismos
   in-what of-manner through the.MS.3MS-reasoning
   ‘you see how He has established all the heavens through His reasoning’
   (Shenoute, Mingarelli 288b:1-8 [Layton 2000, §458b])

In their insensitivity to intervention effects, wh-in-situ phrases behave exactly like overtly moved wh-phrases, which may also cross negation (69a) and quantifiers (69b).

Wh-movement crossing intervening scope-bearing elements

(69) a. **n-a$h n-he n-ten-rokh an hen tei-epitymia m-pneumatikon ehun**
   in-what of-manner NEG-1PL-AUX-burn NEG in this.FS-desire of-spiritual PCL
   e-ne-pahre [et ti kōō n-n-psykhe]? (negation)
   to-DD.PL-medicine COMP give solace to-DD.PL-soul
   ‘how shall we not burn in this spiritual desire for the medicine that gives solace to
   the souls?’ (Hilaria 1:20-21)

b. **awo n-a$h n-he anon tān-sōtam p-wa p-wa hrai** (quantifier)
   and in-what of-manner we (PRES).1PL-hear DD.MS-one DD.MS-one PCL
   hōn te.f-ape
   in DD.FS.3S.language
   ‘And how do we hear each one (of us) in his native tongue?’ (Acts 2:8, ed. Thompson)

Assuming with Chomsky (2005:16-8) that LF operations have no access to the morphophonological cycle that maps syntactic structure to the phonological interface, we conclude that the Coptic patterns represents a hitherto unnoticed type of wh-in-situ, which is derived by a syntactically invisible movement operation. The only difference we must posit between the wh-fronting and wh-in-situ pattern concerns the pronunciation site of the moved wh-phrase. Since Coptic wh-in-situ instantiates a ‘hidden’ movement configuration, the morphological effects of special inflection fall into place.

8. LF movement in Hausa wh-in situ

Although wh-in situ has marginal status in Hausa, where licensed, an LF movement analysis provides a feasible account of its properties. To begin with, this account accommodates the prohibition against relative aspect marking in these constructions: since wh-movement takes place after the point of transfer to the phonology, it is to be expected that it does not feed overt
morphology. Secondly, the argument-adjunct asymmetry also receives an explanation under an LF movement analysis. It has been proposed for Mandarin Chinese wh-in-situ questions that only wh-adverbials, as genuine operators, are licensed to move to their scope position at LF, while wh-arguments do not have operator status. For most Hausa speakers, the preference for adverbial wh-in situ constructions suggests an analysis along similar lines. While wh-adjuncts are licensed to raise at LF, Hausa lacks a true wh-in-situ licensing strategy for arguments. This excludes an unselective binding account (Reinhart 1998), according to which only wh-arguments, which contain a nominal head, can function as variables, and can thus be interpreted via unselective binding by a null question operator. The third type of evidence in favour of an LF movement analysis of Hausa wh-in situ comes from intervention effects: the following wh-in situ adverb questions are degraded in the presence of a c-commanding negation element (70) or quantification expression (71). In each case, our informants volunteered the wh-fronting counterpart of the construction, as shown in (70B') and (71b). These intervention effects indicate that LF movement of the wh-phrase to its scope position is blocked by an intervening quantifier or negation element.

**Intervention effects in Hausa wh-in situ**

(70) A. nā jē kō’iñā yāu! Nā jē jāmi’ār, nā jē kāsuwā,  
1S.PF go everywhere today 1S.PF go university DD 1S.PF go market  
nā kuma jē asibit…  
1S.PF and go hospital  
‘I’ve been everywhere today! I’ve been to the University, I’ve been to market, and I’ve been to hospital…’  
B. *bā kā jē iñā ba?  
NEG 2MS.PF go where NEG  
‘where haven’t you been?’  
B’. iñā (né) bā kā jē ba?  
where (FM.M) NEG 2MS.PF go NEG  
‘where haven’t you been?’

(71)a. *kōwānē yārō yā zō dagā iñā?  
each boy 3MS.PF come from where  
‘where does each boy come from?’  
b. dagā iñā (né) kōwānē yārō ya zō?  
from where FM.M each boy 3MS.REL.PF come  
‘where does each boy come from?’

For Hausa, an empirical issue arises with respect to the grammaticality of non-echo multiple wh-questions like wā ya sāyī mē? ‘Who bought what?’, in which one wh-phrase is fronted and the other remains in situ. According to Tuller (1986) and, more recently Hartmann (in press) and Hartmann & Zimmermann (in press), Hausa allows non-echo multiple wh-constructions with a pair-list reading, requiring an answer in which individuals and objects bought are matched in
pairs (e.g., John bought a book, Mary bought flowers, Bill bought a cup of coffee). However, as Newman (2000: 494) has pointed out, ‘wâ ya säyi mê?’ ‘Who bought what?’ is not semantically comparable to the corresponding English sentence, but rather carries the connotation, ‘What did you say who bought?’ with echo focus on ‘What?’ The echo interpretation of the in-situ wh-phrase in multiple questions has been confirmed by our Hausa informants, who judge multiple questions as ungrammatical on a true interrogative reading of the in-situ wh-phrase.

Multiple wh-question in Hausa with echo interpretation of the wh-in situ phrase

(72) \[ wâ \quad ya \quad säyi \quad mê \]
who 3MS.REL.PF buy what

*‘who bought what?’ (interrogative reading of wh-in situ phrase)
‘who bought WHAT?!” (echo reading of the wh-in situ phrase)

Furthermore, our informants also rejected non-echo multiple wh-questions with three wh-expressions. Significantly, only the left-peripheral wh-phrase receives a genuine interrogative interpretation, while both in-situ wh-phrases are licensed only with an echo interpretation. We propose an analysis of Hausa multiple wh-questions with one genuine and one or more echo wh-phrase(s) as instances of second-order questions: questions that function as responses to questions, where the echo marks the misheard or unexpected part of the preceding question (Comorovski 1996).

Unlike in English-type languages, then, only the fronted wh-phrase in Hausa multiple wh-questions receives a genuine wh-interpretation. It follows that the mechanism that brings about the pair-list interpretation in English-type languages is not available for Hausa. This falls out of the present analysis, according to which there is only one scope position that licenses the genuine question interpretation of wh-phrases: the specifier position of the left-peripheral focus phrase. If this position is occupied, extraction of the lower wh-phrase is blocked both in the overt syntax and at LF. This predicts that a left-peripheral focus phrase should also block a genuine question interpretation for a wh-in situ phrase, a prediction that is borne out by the empirical evidence. As shown by example (73), wh-in-situ questions with a fronted focus phrase are only acceptable (albeit marginally) with an echo reading of the in situ wh-phrase.

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20 For discussion on pair-list readings, see Kuno & Robinson (1972); Pesetsky (1987, 2000); Dayal (2002); Aoun & Li (2003). Earlier LF movement analyses of multiple wh-questions in English proposed that, while the left-peripheral wh-phrase who moves to its scope position in the overt syntax, the in-situ wh-phrase what also raises and adjoins to the wh-scope position at LF (Higginbotham & May 1981; Pesetsky 1987).

21 The following discourse (taken from Dayal 2002: 516 (12)) illustrates second order questions, where subscript indicates an inaudible element that corresponds to the request-for-repetition echo in the response.

(i) a. Where did Mary buy \[ the \] book?
b. Where did Mary buy \[ WHAT \]?
c. (I said) where did Mary buy the book.
Combination of focus fronting with wh-in situ

(73) Yusuf yà cè [Audù dà Mìssà nè sukà sàyi mè à kàsuwà]
    Yusuf 3MS.PF say Audu and Musa FM.PL 3PL.REL.PF buy what at market
    *'Yusuf said what AUDU AND MUSA bought at market’
    (interrogative reading of wh-in situ phrase)
    ?'Yusuf said that it was AUDU AND MUSA who bought WHAT at market?!
    (echo reading of the wh-in situ phrase)

To explain the unavailability of the interrogative reading of wh-in situ phrases in focus fronting contexts, it could be argued that in Hausa wh-phrases are required to be in focus. According to this perspective, if some other constituent is in focus, the out-of-focus status of the wh-phrase yields an ungrammatical result. This view can be refuted on two main grounds. Firstly, the received wisdom that non-echo wh-phrases are inherent focus expressions has been disputed in the literature (see Erteschik-Shir (1986)). Secondly, as example (74) shows, Hausa does permit a combination of focus-ex situ and focus-in situ within a single clause. This multiple focus is possible when the two focused constituents are contrastive (Green & Jaggar 2003).

Combination of ex situ and in situ focus in Hausa

(74) A: kun ga màtàà à makuwa nà, kó?
    2PL.PF see wife.of.1s at school Q
    ‘you saw my wife at school didn’t you?’
    B: à’à, yàrùnkà (nè) mukà gani à kàsuwà
    no boy.of.2MS (FM.M) 1PL.REL.PF see at market
    ‘no, we saw YOUR BOY at MARKET’ (Green and Jaggar 2003: 198)

The fact that multiple focus constructions are permissible shows that Hausa has a genuine in-situ focus position, which is available for presentational, new information and contrastive focus. This contrast between focus in situ and wh-in situ is consistent with the fact that focus in situ is more widely available across the board in Hausa than wh-in situ. In addition, the availability of a focus in-situ position accommodates the echo reading of wh-in-situ expressions, assuming with Erteschik-Shir (1986) and Artstein (2002) and various others that echo wh-phrases are focus constituents.22

9. Syntactic analysis

In this section, we relate the parametric differences between Hausa and Coptic, with respect to the ex-situ versus in-situ position of the wh-phrase, to different pronunciation sites of the moved wh-phrase: the phonological realisation of the operator in the target position of wh-movement

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22 LF movement must be excluded for echo wh-in-situ phrases on the basis that if such phrases were able to raise at LF, they should license a genuine wh-interpretation in the same way that non-echo wh-in situ phrases do. In addition, an LF movement analysis is also unfeasible for presentational focus, which lacks operator status and is therefore prohibited from raising to the left periphery in the overt syntax. Due to their operator characteristics, new information and contrastive focus in situ would in principle be eligible for LF movement (Surányi 2003). However, since echo and presentational focus are interpretable in situ, one might wonder whether the same discourse-driven interpretive mechanisms are also applicable to new information and contrastive focus in situ.
gives rise to the ex-situ pattern, while the phonological realisation of the operator in the original position yields the in-situ pattern. We will also show that the pronunciation site of the \textit{wh}-phrase is directly related to another parameter: the presence or absence of relative TAMS.

9.1. The copy theory of movement
The advent of the Minimalist program led to the replacement of trace theory (Chomsky 1981; Rizzi 1990) by the ‘copy theory of movement’, according to which movement does not introduce a trace, but leaves behind a identical copy of the moved constituent. Structures formed by movement thus exhibit multiple copies of the moved element (Chomsky 1993; 1995; 2000). The copy theory of movement captures a much broader spectrum of empirical phenomena than trace theory, in which only the head of the \textit{wh}-chain is predisposed for pronunciation. Copy theory allows for an option that is unavailable in trace theory, namely that the copy privileged for pronunciation is the lowest rather than the highest copy. This possibility has been explored in important work by Brody (1995), Groat and O’Neil (1996), Pesetsky (1997, 1998, 2000), Bobaljik (2002) and various others.

The phonetic realisation of the lowest \textit{wh}-copy is generally thought of as a last resort option available only when the pronunciation of the highest chain link does not result in a convergent derivation at PF (e.g., Franks (1998); Bošković (2002); Nunes (2004)). According to Reintges, LeSourd and Chung’s (2006) analysis, Coptic \textit{wh}-in situ involves an application of \textit{wh}-movement in which the lower copy is pronounced. It follows that lower copy pronunciation represents a parametric option. Such cases of ‘apparent’ \textit{wh}-in-situ are clearly distinguishable from cases of LF movement, since they feed into overt morphology.

Adopting the late insertion view of Distributed Morphology (Halle and Marantz 1993; Marantz 1997), we assume that the syntactic component is essentially phonology-free. The core task of the syntax is to create structural dependencies through syntactic operations, while spell-out operations are confined to the Morpho-phonology (Bobaljik 2002). Spell-out operations fall into two classes, namely (i) insertion of lexical material and phonetic realisation of copies, and (ii) conversion of a hierarchical structure into a linear order. The decision of which copy to pronounce may be dictated by language-specific constraints, but may also fall out from the language’s parameter setting. In short, nothing is deleted, but not everything is pronounced.

9.2. Lower copy pronunciation and relative TAMS in Coptic
In the current Minimalist framework, movement is driven by the requirement to value and delete uninterpretable (or unvalued) features on both the attracted category (the goal) and the attractor category (the probe). Feature valuation takes place when the probe and goal stand in a local configuration, so that the unvalued features of one can be matched with the corresponding valued features of the other. Once the probe and the goal are brought together within a single projection, the uninterpretable features on both categories are erased, an operation that otherwise leaves the original copy of the goal intact (Chomsky 2000: 122-7, 2001a: 4-5).

In the case of Coptic \textit{wh}-in situ, the probe for \textit{wh}-movement is the head of the focus phrase and the goal is the \textit{wh}-phrase. With respect to their feature specification, we assume following Chomsky (2000: 128) that \textit{wh}-phrases have an uninterpretable feature [\textit{uwh}] and an interpretable interrogative feature [\textit{uQ}] that matches the uninterpretable interrogative feature [\textit{uQ}] on the focus
A plausible assumption, given the well-known selectional properties of subordinating complementisers (§ 2.2), is that the focus head inherits its uninterpretable [uQ] feature from the immediately dominating head C⁰ (Chomsky 2001b: 9). If the uninterpretable wh-feature on the in-situ wh-phrase cannot be eliminated via movement to the designated scope position, it can no longer receive an interrogative interpretation. As a result, such wh-in-situ items in Coptic can only receive a specific indefinite interpretation. Movement of the wh-phrase to the specifier position of the focus phrase yields the proper checking configuration. In the canonical wh-in-situ pattern, the relative TAM overtly marks a local specifier-head relationship between the designated functional head and the topmost copy of the moved wh-phrase, which is not pronounced. In other words, two parameters concerning phonological realisation are involved: firstly, whether the higher or the lower copy of a moved wh-phrase is pronounced, and secondly, which of the copies triggers the morphological effects of special inflection. In Coptic, the TAM incorporates into the relative marker, triggering various complementiser alternations. Reintges (2003) views complementiser alomorphy as an indication of T⁰-to-F⁰ movement, which is a corollary of T⁰-to-C⁰ movement (see Rizzi (1996); Pesestky & Torrego (2000)). The syntactic derivation of a wh-subject in situ question like (75) is represented by the tree diagram in (76).

(75) **ere nim na-na na-n?**  
**REL who go-have.mercy for-1PL**  
‘who will have mercy upon us?’ (Shenoute, Paris 131⁵⁴v: a14 [Layton 2000:249])

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23 This feature composition implements the idea that wh-movement is a means of clause typing, which specifies a clause as a question. The feature specification of the attracting probe, however, is a matter of debate in the current literature. For instance, Cheng and Rooryck (2000) argue that the C⁰ node has an interpretable [Q] feature and an unvalued [wh] feature.
Turning to the non-canonical *wh*-fronting construction in Coptic, we observe that in the case of subject questions, a pronominal subject copy appears in the preverbal subject position, and the TAM word assumes the general form.

(77) *nim* a-f-ent-ak e-pei-ma?
who PF-3MS-bring-2MS to-DEM.MS-place
‘Who brought you here?’ (KHML I 3:7-8)
The question that arises is why the morphological effects of special inflection do not surface whenever the topmost copy is phonologically realised. Reintges, LeSourd & Chung (2006) propose that the relative marker is phonologically realised when it is determined which copy of the wh-phrase is pronounced. If the lowest copy is pronounced, then the relative marker is spelled out overtly. If the highest copy of the wh-phrase is pronounced, then the relative marking, which would occur within the same minimal projection, is left unpronounced. In other words, either the head or the specifier of the Coptic focus phrase can be phonologically realised, but not both, a situation is is reminiscent of the Doubly-filled COMP Filter in English (Chomsky and Lasnik 1977). In lacking these ‘Doubly-filled Comp’ effects, Hausa wh-constructions differ from those in Coptic, despite the fact that special inflection in both languages is conditioned by an application of syntactic wh-movement.

9.3. Higher copy pronunciation and relative TAMS in Hausa
As in Coptic, we assume that there is a relationship between the force-indicating C⁰ head, the F⁰ head and the T⁰ head in Hausa. The selectional properties of dedicated declarative and
interrogative subordinating complementisers provide evidence for the relationship between C⁰ and F⁰. We further assume that F⁰ and T⁰ are in a syntactic agreement relation of feature sharing (Chomsky 2000; 2001a), but unlike in Coptic, where the F⁰ head hosts a relative marker, the corresponding head in Hausa hosts the optional focus-marking copula, and the special inflection is located in T⁰. The features inherited by T⁰ from F⁰ are spelled out by relative aspect marking. This is in line with Chomsky’s (2001b: 13) observation that successive-cyclic wh-movement may have morphological effects surfacing ‘sometimes in C (where we would expect it), but commonly in the agreement system headed by T (where we would not). That makes sense if C-T are really functioning as a unit in inducing agreement’.

Although T⁰ does not raise to F⁰ in Hausa, there is compelling evidence of the syntactic relation between these two heads. Firstly, the fact that relative aspect marking is obligatory when a constituent moves to the specifier of FP provides strong support for the existence of this relationship. Secondly, the absence of relative aspect marking in the absence of syntactic movement points to the same conclusion. Thirdly, the prohibition against relative aspect marking in subjunctive clauses, which lack a left-Peripheral focus phrase, shows that relative aspect marking on T⁰ is contingent upon the presence of F⁰ as a probe for movement. Finally, there is also evidence that the agreement relation may extend from T⁰ to the V⁰ head, given the morphology of a certain class of Hausa (‘grade 2’) verbs, which flags the presence of an unpronounced copy of the wh-phrase ($2.1$).

Turning to the details of the derivation, observe that Hausa subject questions with partitive wh-phrases provide direct evidence for movement of the wh-subject via the specifier of TP to the specifier of FP, because the partitive phrase itself can be stranded in the specifier of TP, as in (79). The movement of the subject to the specifier of TP is motivated by case licensing. In the tree diagrams below, the feature sharing relation between heads is represented by dotted arrows.

(79) \textit{\textit{wàccè  cè  dágà cikinsù  ta  mutù?}}
\begin{tabular}{llll}
\textbf{which.\textit{one}.\textit{F}  \textit{FM}.\textit{F}} & \textbf{from} & \textbf{among.\textit{3PL}  \textit{2FS.REL.PF} die} \\
\end{tabular}
\textbf{‘which among them died?’} (adapted from Newman 2000: 494)

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\(^{24}\text{Tuller (1986: 111) argues for an analysis according to which an INF head governed by a [+FOCUS] operator may not appear in the non-relative form. This restriction is formalised in terms of a [+/-\textit{DEFINITE}] feature, where subjunctive INF, as an irrealis category, has the feature [-\textit{DEFINITE}], while relative INF has the feature [+\textit{DEFINITE}].\}

Direct objects in Hausa are case-licensed in the complement position of the lexical verb (81). Therefore, there is no case-motivated mechanism for the raising of *wh*-objects within TP. We assume that the direct object *wh*-phrase moves directly from its base position to the specifier of FP, and that this direct movement is made possible by the fact that all the functional heads along the path of movement are connected within a feature-sharing relationship. This creates an extended domain within which long-distance movement is possible (82).

(81) *me yärä sukà cè?*
    what children 3PL.REL.PF say
    ‘what did the children say?’
This analysis departs from Chomsky’s (2001) ‘Derivation by Phase’ model, according to which wh-movement proceeds successively-cyclically through different derivational domains or PHASES, including the verb phrase with full argument structure and the CP. For Hausa, there is no evidence for autonomous cyclic domains. Instead, the TP-VP field and the left periphery function as a single domain for syntactic derivation.

10. Summary and conclusions
A parametric analysis of special inflection in Hausa and Coptic provides new insights into the nature of syntactic derivations affecting the morpho-phonology. Hausa and Coptic are the mirror image of each other with respect to the interaction between these parameters. In Hausa, relative TAMs are obligatory when a focus/wh-phrase moves overtly to the specifier of FP. In contrast, Coptic relative TAMs are present when the focus/wh-phrase appears in situ. However, we have shown that Coptic wh-in situ represents a hidden movement configuration, since it displays the same scope and interpretational properties as the marked focus/wh-fronting strategy. Since Coptic wh-in situ involves an application of syntactic movement, the presence of special inflection as the morphology of extraction falls into place. In terms of position, the Coptic relative marker corresponds to the copular focus marker in Hausa, while functionally it
corresponds to the relative aspect morphology. This comparative syntactic analysis also provides evidence for the close interrelation between left-peripheral and tense heads, which entails that the topic-focus field and the verbal-inflectional field form a single domain for movement operations.

References


