

Chapter 11

Typology of Tigrinya WH-interrogatives

Keffyalew Gebregziabher

CNRS-IKER UMR 5478

Maia Duguine

CNRS-IKER UMR 5478

In this paper, we investigate wh-interrogatives in Tigrinya. We show that Tigrinya at least employs three independent strategies, including the cross-linguistically known wh-in-situ and wh-movement, to express content questions. First, we demonstrate that wh-interrogatives in Tigrinya occur in different syntactic positions, suggesting that the simple parametric dichotomy between wh-in-situ and wh-movement does not explain all the facts in Tigrinya. Then, we run syntactic diagnostics, such as long distance dependency, reconstruction effects, weak crossover and island effects, and show that the three strategies indeed exhibit different sensitivities to the list of syntactic diagnostics. Finally, we examine some interpretive properties, namely presuppositionality and exhaustivity, of the three wh-interrogative strategies and we observe that while the wh-in-situ and wh-movement strategies exhibit no exhaustivity effects, the third strategy appears sensitive to both interpretive properties.

1 Introduction

In this paper, we discuss the nature of wh-interrogatives in Tigrinya, an Ethio-Semitic language mainly spoken in Ethiopia and Eritrea. Tigrinya has a basic SOV word order (Hetzron 1972) in a neutral context (1).



- (1) *dimu ʔančwa səg^wig^w-a*
 cat mouse chase.GER-3FSG.SBJ
 ‘A cat chased a mouse.’

Wh-phrases¹ in the language can surface in different syntactic positions of the clause. The examples in (2) show that both wh-questioned subjects and objects can surface in what seems to be their canonical argument position, maintaining the SOV word order.

- (2) a. *mən ni-selam riʔ-u-wwa?*
 who ACC-Selam see.GER-3MSG.SBJ-3FSG.OBJBJ
 ‘Who saw Selam?’
 b. *selam ni-mən riʔ-a?*
 selam ACC-who see.GER-3FSG.SBJ
 ‘Who did Selam see?’

Wh-questioned subjects and objects can also surface to the left of the clause and be followed by the verb. In this case, the basic order of Tigrinya is altered, since the verb is not the final element of the clause: (3a) shows $S_{wh}VO$, whereas (3b) shows $O_{wh}VS$.²

- (3) a. *mən riʔ-u-wwa ni-selam?*
 who see.GER-3MSG.SBJ-3FSG.OBJ ACC-Selam
 ‘Who saw Selam?’
 b. *ni-mən riʔ-a selam?*
 ACC-who see.GER-3FSG.SBJ Selam
 ‘Who did Selam see?’

In comparison to the structures in (2), non-neutral orders are possible in which the verb remains in final position. For instance, $O_{wh}SV$ order is possible with a wh-questioned object (4).

- (4) *ni-mən selam riʔ-a?*
 ACC-who Selam see.GER-3FSG.SBJ
 ‘Who did Selam see?’

¹Some of the basic Tigrinya wh-words include *mən* ‘who’, *ʔintay*, ‘what’, *ʔabəy* ‘where’, and *kəməy* ‘how’. Some of these words may inflect for case as in *ni-mən* ACC-who ‘whom’ (Gebregziabher 2013).

²We mainly provide examples with verbs in the perfective and gerundive aspects as they are functionally the same in Tigrinya. We largely set aside the imperfective forms here.

Wh-questioned adjuncts in the language can also maintain the SOV word order (5) or alter it by moving the wh-phrase to the left-edge of the clause along with the verb (6).

- (5) a. *selam ni-yared ʔabəy riʔ-a-tto?*
 Selam ACC-Yared where see.GER-3FSG.SBJ-3MSG.OBJ
 ‘Where did Selam see Yared?’
 b. *selam ni-yared kəməy riʔ-a-tto?*
 Selam ACC-Yared how see.GER-3FSG.SBJ-3MSG.OBJ
 ‘How did Selam see Yared?’
- (6) a. *ʔabəy riʔ-a-tto selam ni-yared?*
 where see.GER-3FSG.SBJ-3MSG.OBJ Selam ACC-Yared
 ‘Where did Selam see Yared?’
 b. *kəməy riʔ-a-tto selam ni-yared?*
 how see.GER-3FSG.SBJ-3MSG.OBJ Selam ACC-Yared
 ‘How did Selam see Yared?’

Finally, wh-questions in which the wh-subject or wh-object surfaces to the right of the verb are unattested (7-8).

- (7) **ni-selam riʔ-u-wwa mən?*
 ACC-selam see.GER-3MSG.SBJ-3MSG.OBJ who
 ‘Who saw Selam?’
- (8) **selam riʔ-a ni-mən?*
 Selam see.GER-3FSG.SBJ ACC-who
 ‘Who did Selam see?’

In this paper, based on the above facts, we show that Tigrinya has three independent strategies to express wh-interrogatives. The first strategy, illustrated in (2), involves a standard wh-in-situ configuration of the type observed in languages like Mandarin Chinese, Japanese, etc., where the wh-phrase remains in its base-position. The second strategy, illustrated in (3), involves movement of the wh-phrase immediately left-adjacent to the finite verb, followed by T-to-C movement (cf. 4). This is similar to what is observed in typical wh-movement languages, such as English, Hungarian, etc. Finally, the third strategy, illustrated in (4), involves movement of the wh-phrase to the left edge of the main clause, without the verb accompanying it. In order to simplify the discussion (pending their

full description), we refer to these strategies as (i) wh-in-situ, (ii) wh-movement, and (iii) peripheral-wh, respectively.

The remainder of the paper is organized as follows: Section 2 presents diagnostics for A'-movement dependencies for distinguishing the different wh-interrogative strategies under discussion. We demonstrate how the three wh-interrogatives differ with respect to islands, reconstruction and WCO effects. Section 3 looks into the interpretive differences. Finally, Section 4 concludes with some remarks on future endeavours.

2 Diagnosing A'-movement properties

This section explores the syntactic properties of each of the three wh-configurations introduced above, with respect to their A'-properties, by testing long-distance dependencies, reconstruction, weak crossover, and island-sensitivity.

On the one hand, we show that three very different wh-strategies emerge, exhibiting some regularities behind the apparent “free” word order of Tigrinya wh-interrogatives. On the other hand, we show that among these three strategies, the wh-in-situ strategy indeed shows strong similarities with typical wh-in-situ languages, whereas the wh-movement strategy has the properties expected from a language with wh-movement, validating the characterization we made in Section 1 merely based on the observation of word order facts. The third strategy, the peripheral-wh strategy, displays, as we will see, hybrid properties, between a movement and a non-movement construction.

2.1 Long-distance dependency (LDD)

Long-distance dependency refers to a syntactic-semantic relation between a constituent (e.g., a wh-phrase or a pronoun) and a syntactically licensed position (e.g., a gap) in an embedded clause (Ross 1967, Chomsky 1977). In wh-movement languages, an embedded wh-phrase surfaces at the left-edge of the matrix clause (through successive-cyclic movement), exhibiting long-distance dependency with respect to its lower position, as illustrated in (9).³

- (9) Who_i does Mary know [that Anna kissed *t_i*]?

³Some of the Tigrinya complementizers include *zi-*, *kəmzi-* and *?intə-*: *zi* is used to introduce relative and nominalized clauses, but *kəmzi-*, which also includes *zi-*, introduces CP complements. In contrast, *?intə-* is used to introduce non-finite clauses and indirect questions (see Gebregziabher 2023 for a detailed discussion).

In bona-fide wh-in-situ languages, long-distance dependencies are observable through scopal effects (Huang 1982, Bayer & Cheng 2017, a.o.). This is nicely illustrated by the ambiguous example given in (10) from Mandarin Chinese (hereafter Chinese), where the ambiguity arises due to the narrow and wide scope readings (example from Bayer & Cheng 2017: 4, see also Huang 1982: 254).

- (10) Mandarin Chinese
 Bótōng zhīdào Huángróng xǐhuān shéi (?)
 Botong know Huangrong like who
 a. ‘Botong knows who Huangrong likes.’ (indirect question)
 b. ‘Who does Botong know Huangrong likes?’ (matrix question)

In Tigrinya, both standard wh-movement and wh-in-situ configurations exhibit long-distance dependencies (similar to Chinese and English, respectively).

Before we introduce long distance dependencies in Tigrinya, first notice that clausal complementation in Tigrinya features an embedded clause to the left of the matrix verb, introduced by a complementizer prefixed on the embedded finite verb, as illustrated in (11):

- (11) yared [selam ni-hailu kəmzi-səʕam-ət-to]
 Yared Selam ACC-Hailu COMP-kiss.PFV-3FSG.SBJ-3MSG.OBJ
 fəlit’-u
 know.GER-3MSG.SBJ
 ‘Yared knew that Selam kissed Hailu.’

Using (11) as a baseline example, we show that (i) the wh-movement strategy, as in English, allows for long-distance dependency across clauses, and (ii) the wh-in-situ strategy, as in a typical wh-in-situ language, such as Chinese, allows wh-phrases to take wide scope.⁴

In conformity to the standard wh-movement strategy, Tigrinya wh-questioned embedded objects can surface to the left of the matrix verb, in a position that is unambiguously outside the embedded clause as shown in (12).

⁴In fact, cross-linguistically, this wide scope bearing property is widely attested in a variety of languages with the typical wh-in-situ strategy (see, for example, Ko 2005 on Japanese, Torrence & Kandybowicz 2015 on Krachi, Green & Jaggar 2003 on Hausa, Sabel & Zeller 2006 on Zulu, Bayer & Cheng 2017 on Bangla, a.o.).

- (12) *ni-mən_i məsil-u-wwo yared [selam t_i*
ACC-who think.GER-3MSG.SBJ Yared Selam
zi-səŋam-ət-to]?
COMP-kiss.PFV-3FSG.SBJ-3MSG.OBJ
‘Who did Yared think that Selam kissed?’

Consistent with the standard *wh*-in-situ strategy, Tigrinya *wh*-questioned embedded objects can remain in their base-generated position and can have wide scope reading as illustrated in (13).

- (13) *yared [selam ni-mən kəmzi-səŋam-ət] fəlit’-u?*
Yared Selam ACC-who COMP-kiss.PFV-3FSG.SBJ know.GER-3MSG.SBJ
a. ‘Yared knew who Selam kissed’
b. ‘Who did Yared know that Selam kissed?’

With regard to the third *wh*-interrogative strategy identified above, the peripheral-*wh* strategy, it also allows long-distance dependency. Examples in (14)–(15) illustrate how the questioned-object of the embedded verb surfaces unambiguously in the matrix clause (and unlike in example (12) above, the matrix verb does not surface right-adjacent to it). In this case, the embedded verb also remains in its final position (15).

- (14) *ni-mən_i yared [t_i zi-səŋam-ki] məsil-u-wwo?*
ACC-who Yared COMP-kiss.PFV-2FSG.SBJ think.GER-3MSG.SBJ-3MSG.OBJ
‘Who did Yared think that you kissed?’
- (15) *ni-mən_i yared [selam t_i kəmzi-səŋam-ət-to]*
ACC-who Yared Selam COMP-kiss.PFV-3FSG.SBJ-3MSG.OBJ
fəlit’-u?
know.GER-3MSG.SBJ
‘Who did Yared know that Selam kissed?’

It is interesting to note that as in (12) above, a mixed pattern is possible, where the embedded verb can surface to the left of its subject (16), apparently due to T-to-C movement.

- (16) *ni-mən_i yared [t_i kəmzi-səŋam-ət-to selam]*
ACC-who Yared COMP-kiss.PFV-3FSG.SBJ-3MSG.OBJ Selam
fəlit’-u?
know.GER-3FSG.SBJ
‘Who did Yared know that Selam kissed?’

Thus, the three Tigrinya wh-interrogative strategies, as expected, exhibit long-distance A'-dependencies.

2.2 Reconstruction

Another diagnostic widely used for A'-movement is *reconstruction* – a phenomenon which refers to the observation that certain syntactic relations which hold in the position at which the constituent attaches before A'-movement, still hold after movement (Chomsky 1981, 1986). For example, Binding Condition A, which requires anaphors to be bound in their local domain, is such a relation.⁵ The examples in (17) illustrate the point.

- (17) a. [Which pictures of herself_i] does Mary_i like *t_i*?
b. [Which pictures of each-other_i] did [Mary and John]_i like *t_i*?

In (17), the two wh-phrases, *which pictures of herself* and *which pictures of each other*, as objects of the verb *like*, are associated with two structural positions: a moved/derived position at the beginning of the sentence and a base-merge position before the movement happens. Thus, since the reconstructed constituents contain anaphors, namely the reflexive pronoun *herself* and the reciprocal *each other*, they must be bound by a local antecedent in order to satisfy Condition A after the reconstruction happened. Therefore, the only way to satisfy Condition A is to assume that the wh-phrase, along with the anaphors, have been reconstructed to their base-merge position at LF (see Fox & Nissenbaum 2004 and references cited therein for a range of other alternatives).

In Tigrinya, there are different types of anaphors, including the reciprocal *hidhid* (Kogan 1997), and reconstruction of wh-phrases is permitted irrespective of whether the verb moves along with the wh-phrase or not. In the baseline sentence in (18), for example, *nənayhidhidom* is a reciprocal anaphor and the plural DP *Selam and Yared* is its antecedent. Because the noun phrase *Selam and Yared* c-commands the anaphor *nənayhidhidom*, Condition A is trivially satisfied, and a bound interpretation is licensed.

- (18) *selam-n yared-n nənayhidhidom siʔlitat fəty-om*
Selam-and Yared-and each.other pictures like.GER-3MPL.SBJ
‘Selam and Yared liked pictures of each-other.’

⁵For current overview and debate on the topic, see Safir (2004), Bruening & Al Khalaf (2019), a.o.

The examples in (19) and (20) show how *wh*-phrases reconstruct in both the *wh*-movement and the peripheral-*wh* strategies, respectively. Surprisingly, the bound interpretation of the anaphors is also licensed in these examples, despite the fact that the DP, *Selam-n Yared-n*, fails to c-command the anaphor, *nənayhi-dhidom*. The bound interpretation is, however, expected if the anaphor is interpreted in its reconstructed position, where it is c-commanded by *Selam and Yared* in accordance with the locality requirement (i.e., Principle A of the binding theory). In this regard, the *wh*-movement strategy is acceptable compared to the peripheral-*wh*, irrespective of their reconstruction as illustrated by (19) compared to (20).⁶

- (19) ?? ʔayənay nənayhi-dhidom_i siʔlitat fəty-om [selam-n
which each.other pictures like.GER-3PL.SBJ Selam-and
yared-n]_i?
Yared-and
‘Which pictures of each-other did Selam & Yared like?’ *Wh*-movement
- (20) ʔayənay nənayhi-dhidom_i siʔlitat [selam-n yared-n]_i
which each.other pictures Selam-and Yared-and
fəty-om?
like.GER-3MPL.SBJ
‘Which pictures of each-other did Selam and Yared like?’ *Peripheral-wh*

Thus, if the presence/absence of reconstruction effects (under Binding Condition A) is indicative of movement, then the above examples illustrate differences among the three types of *wh*-interrogative strategies in Tigrinya.

2.3 Weak crossover

Weak crossover (WCO) refers to the condition where A'-moved constituents cannot dislocate across c-commanding pronouns that they end up binding (Chomsky 1977, Wasow 1979, Chomsky 1981; see also Safir 2017 for a recent overview and extensive discussion). In the literature, it has been assumed that A'-movement is subject to WCO effects because a *wh*-phrase cannot cross a c-commanding constituent that embeds a co-indexed pronoun (Chomsky 1977, Wasow 1979, Postal 1993, a.o.).

⁶Here we are using three degrees of unacceptability judgements offered by the consultants: single question mark (?) refers to sentences that are judged as less/mildly deviant by some speakers, the two question marks (??) for highly deviant, and the asterisk (*) for out-right ill-formed construction for the majority of the speakers.

For example, in English, the movement of wh-phrases induces WCO effects as illustrated in (21). (21) is bad because the trace of the wh-phrase in the object position does not c-command the pronoun that binds it inside the subject.

- (21) ?? Who_i does [his_i mother] like t_i?

Similarly, Huang (1982) shows that in-situ wh-expressions in Chinese also trigger WCO effects, despite remaining in an in-situ position (22).

- (22) * [Ta_i-de mama] xihuan shei?
s/he-DE mother like who
*Whom_i does his/her_i mother like t_i?

In Tigrinya, some WCO effects are observed among the different wh-interrogative strategies. First notice that Tigrinya possessive pronouns appear as a suffix attached on the possessee (e.g., *?addi?-u*/mother-his/‘his mother’). In (23), the possessive pronoun *-a* ‘her’ attaches to the noun *?adda* ‘mother’ and gets its relevant interpretation by co-indexing with the proper name (i.e., an R-expression) *Selam*, which it does not c-command.

- (23) *?addi?-a_i ni-selam_i ti-fət-u?*
mother-her ACC-Selam 3-like.IPFV-3FSG.SBJ
‘Her_i mother likes Selam_i.’

Thus, using (23) as a base and the assumption that (possessive) pronouns can be dependent on wh-phrases when certain specific structural conditions are met, we test whether the possessive pronoun can be a variable bound by the wh-phrase, i.e., co-indexed with the object *nimən* (respecting/avoiding some Binding Principles). If the wh-dependency gives rise to WCO effects, then one can conclude that such dependency is derived by movement; by contrast, if the wh-dependency does not exhibit any WCO effects, presumably movement is not involved.

The Tigrinya wh-movement strategy gives rise to WCO effects, as the deviant example in (24) illustrates.

- (24) ?? ni-mən_i ti-fət-u *?addi?-a_i?*
ACC-who 3-like.IPFV-3FSG.SBJ mother-her
‘Who_i does [her_i mother] like?’ Wh-movement

WCO effects are also observed in the peripheral-wh construction as the ungrammatical construction in (25) illustrates.

- (25) * ni-mən_i ʔaddiʔ-a_i ti-fət-u?
 ACC-who mother-her 3-like.IPFV-3FSG.SBJ
 ‘Who_i does [her_i mother] like?’ Peripheral-wh

Finally, WCO effects are attenuated in in-situ wh-interrogatives as the less-deviant construction in (26) demonstrates.

- (26) ʔ ʔaddiʔ-a_i ni-mən_i ti-fət-u?
 mother-her ACC-who 3-like.IPFV-3FSG.SBJ
 ‘Who_i does [her_i mother] like?’ Wh-in-situ

Thus, the three strategies appear fairly different with respect to WCO: the contrast between (23) and (24-26) is associated to the WCO condition (i.e., a variable cannot be the antecedent of a pronoun or an anaphor that it does not c-command (cf. Reinhart & Reuland 1993). While the ungrammaticality with the wh-in-situ strategy is less severe than the peripheral-wh, the wh-movement strategy is worse than the peripheral-wh. Given that WCO is not a unified phenomenon, the results are not unexpected. Nevertheless, the difference, which essentially lies in degree of marginality or deviance of the questions) is mild and could be due to other factors, not necessarily tied to movement.⁷

2.4 Strong islands

As least since Ross (1967), syntactic islands are considered as standard diagnostics for identifying the presence/absence of wh-movement. In layman terms, islands are a form of “blockade” for certain constituents to move out of certain syntactic configurations. Over the years, syntactic islands— both strong and weak — have been refined to show distinct properties (see Szabolcsi & den Dikken 2003 for an overview), and in what follows we discuss both in distinguishing the three wh-strategies in Tigrinya.

Wh-movement cannot target wh-phrases embedded in “strong” (absolute) islands, such as adjuncts, relative clauses (RCs) modifying an NP, sentential subjects, or coordination (see den Dikken 2018 and references cited therein for a recent discussion). For example, the English sentences given in (27) illustrate how the extraction of wh-phrases from adjunct islands, Complex NP islands and subject islands renders the sentences ungrammatical (see Boeckx 2008: 155, Huang 1982: 497 for more examples).

⁷A reviewer wonders whether the three strategies exhibit Strong crossover (SCO) effects; while space precludes us from presenting the examples here, we report that preliminary results show that the wh-movement strategy induces SCO violation, whereas the other two strategies do not.

- (27) a. *Which boy_i did Mary laugh [after Sarah kissed *t_i*]?
 b. *What_i does John like [the woman who wears *t_i*]?
 c. *Who_i do you think [pictures of *t_i*] would please John?

In contrast, in typical wh-in-situ languages in-situ wh-phrases can be embedded inside syntactic islands.⁸ For instance, Huang (1982: 496-8) shows that in Chinese in-situ wh-phrases can surface inside islands while taking matrix scope. The example in (28) illustrates this with a wh-phrase within an RC (from Bayer & Cheng 2017: 5).

- (28) Mandarin Chinese
 Bótōng xǐhuān shéi xiě de shū?
 Botong like who write DE book
 ‘For which x, x a person such that Botong likes the book that x wrote?’

There is nonetheless an argument-adjunct asymmetry, whereby unlike in-situ argument wh-phrases, in-situ adjunct wh-phrases display the typical island effects of A'-movement (Huang 1982: 525-527). Compare (29) with (28) (from Bayer & Cheng 2017: 5).

- (29) Mandarin Chinese
 * Qiáofēng xǐhuān Bótōng wèishénme xiě de shū?
 Qiaofeng like Botong why write DE book
 Intended: ‘For what reason x, such that Qiaofeng like the book that Botong wrote for x?’

Now turning back to Tigrinya, we begin, once again, with the baseline constructions given in (30)-(31). (30) is a model for an adjunct island: the clause embeds a finite adjunct clause, headed by the complementizer *siləzi*- ‘since’, prefixed onto the verb. (31) is an example of a complex NP, where the object DP is modified by an RC; that is, the noun *məs'haf* ‘book’ is modified by a finite RC, *məhaza?-a zi-s'əhəf-o* ‘(that) her friend wrote’. Finally, (32) and (33) are examples of subject islands represented with a complex subject, both NP and sentential subject, respectively.

⁸While this is not an isolated case of Chinese (see, for example, Sabel & Zeller 2006 on Zulu, Abels & Muriungi 2008 on Kiitharaka, Bayer & Cheng 2017 on Bangla, Ko 2005 on Japanese and Korean, a.o.), there are, as an anonymous reviewer points out, some African languages where in-situ wh-phrases inside islands are blocked (see Amaechi & Georgi 2020 on Igbo, Zentz 2016 on Shona, and Torrence & Kandybowicz 2015 on Krachi where wh-in-situ are barred from islands). Notice, however, that many of these African languages involve optional wh-movement unlike typical wh-in-situ languages.

- (30) salam [yared məhaza siləzi-rəxəb-ə] təhag^wis-a
 Selam Yared friend since-find.PFV-3MSG.SBJ be.happy.GER-3FSG.SBJ
 ‘Selam got excited because Yared found/met a friend.’
- (31) salam [məhaza?-a zi-s’əhaf-o məs’haf] gəzi?-a
 Selam friend-her REL-write.PFV-3MSG.OBJ book buy.GER-3FSG.SBJ
 ‘Selam bought a book her friend wrote.’
- (32) a. nay ?addi?-u si?li ni-Yared yə-ħig^wis-u-wwo
 NAY mother-his picture ACC-Yared 3-please.GER-3MSG.SBJ-3MSG.OBJ
 b. [si?li ?addi?-u] ni-Yared yə-ħig^wis-u-wwo
 picture mother-his ACC-Yared 3-please.GER-3MSG.SBJ-3MSG.OBJ
 ‘A picture of his mother pleased Yared’
- (33) [yared fərəs mi-gzi?-u] ni-salam
 Yared horse NMLZ-buy-3MSG.SBJ ACC-Selam
 ?əgrim-u-ll-a
 surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ
 ‘That Yared bought a horse surprised Selam.’

Based on the above background and baseline sentences, we show that the three Tigrinya strategies are indeed different, as they exhibit different sensitivities for different islands.

2.4.1 Wh-movement

In Tigrinya, the “wh-movement” strategy is sensitive to island effects, and that reinforces our initial hypothesis that this strategy, as in other wh-movement languages, indeed involves movement of the wh-phrase. Evidence comes from the fact that movement of the wh-phrase out of a strong island (e.g., adjunct, complex NP or subject island) accompanied by the matrix verb results in ungrammatical sentences as illustrated in (34-36). This happens irrespective of whether the embedded verb is itself fronted or not. For example, (34) is a typical example of an adjunct island (marked with brackets for convenience). In this case, movement of the wh-phrase *nimən* ‘who(m)’ from this strong island position to the left edge of the matrix clause yields an ungrammatical construction.

(34) Adjunct island

- a. *ni-mən təhag^wis-a selam [siləzi-rəxəb-ə
ACC-who be.happy.GER-3FSG.SBJ Selam since-find.PFV-3MSG.SBJ
yared]?
Yared
'Who did Selam get excited because Yared found?'
- b. *ni-mən təhag^wis-a selam [yared
ACC-who be.happy.GER-3FSG.SBJ Selam Yared
siləzi-rəxəb-ə]?
since-find.PFV-3MSG.SBJ
'Who did Selam get excited because Yared found?'

In the same vein, a bona-fide Complex NP island, given in (35), presents the same result. The sentence is ungrammatical because the *wh*-phrase *mən* 'who', which originates as part of the RC 'the book that someone wrote', dislocated to the left-edge of the sentence, violates the complex NP constraint (Ross 1967, Bošković 2015). The ungrammaticality is not due to the *that*-trace effect.

(35) Complex NP island

- a. *mən gəzi?-a selam [zi-s'əħaf-o məs'ħaf]?
who buy.GER-3FSG.SBJ Selam REL-write.PFV-3MSG.OBJ book
'*Who did Selam buy a book that wrote?'
- b. *mən gəzi?-a selam [mə'sħaf zi-s'əħaf-o]?
who buy.GER-3FSG.SBJ Selam book REL-write.PFV-3MSG.OBJ
'*Who did Selam buy a book that wrote?'

Finally, (36) is an example of a subject island, in which movement out of a complex NP or CP subject — two strong islands — renders the sentences ungrammatical, as expected. Note that the NP subject island has parallel structure with that of possessive constructions in Tigrinya. Tigrinya has two possessive strategies: (i) *nay*-marked with possessor possessee order and (ii) bare (non-*nay*-marked) with possessee possessor order (Gebregziabher 2013). Now compare the base-line examples in (32) with their derivatives in (36a) and (36b). Although both strategies are not always available with relational nouns, in this context, the fact that *picture*-nouns permit multiple complements make the comparison possible, causing the difference in ungrammaticality to arise: the *nay*-marked (a) appears less severe than the non-*nay*-marked.⁹

⁹This is consistent with the cross-linguistic view that languages show variation in terms of

(36) Subject island

- a. ?? *nay mən yə-ħug^wis-u-wwo* *siʔli (ni-)Yared?*
 NAY who 3-please.GER-3MSG.SBJ-3MSG.OBJ picture ACC-Yared
 ‘Who did a picture of please Yared?’
- b. * *mən yə-ħug^wis-u-wwo* *siʔli (ni-)Yared?*
 who 3-please.GER-3MSG.SBJ-3MSG.OBJ picture ACC-Yared
 ‘Who did a picture of please Yared?’

We also tested sentential subjects because it is natural that sentential subjects yield strong island environments (as Ross 1967 originally observed). The *wh*-movement strategy shows sentential subject island effects as well (37).

(37) Sentential subject island

- a. ?? *ʔintay ʔəgrim-u-ll-a* *[yared*
 what surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ Yared
mi-gziʔ-u] *ni-selam?*
 NMLZ-buy-3MSG.SBJ ACC-Selam
 ‘What that Yared bought surprised Selam?’
- b. * *ʔintay ʔəgrim-u-ll-a* *[mi-gziʔ-u*
 what surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ NMLZ-buy-3MSG.SBJ
yared] *ni-selam?*
 Yared ACC-Selam
 ‘What that Yared bought surprised Selam?’

2.4.2 Peripheral-*wh*

A striking contrast emerges when we compare *wh*-movement with the peripheral-*wh* strategy. First, peripheral-*wh*, unlike the *wh*-movement strategy, displays no adjunct island effects (38). This again happens irrespective of whether the verb inverts around the subject or not within the embedded clause.

which complement (e.g., a possessor/theme/agent) they permit to extract out of the complex noun phrase (see Gavrusseva 2000 for a cross-linguistic proposal; see also Alexiadou et al. 2007 for an extensive overview).

(38) Adjunct island

- a. *ni-mən selam [yared siləzi-rəxəb-ə]
ACC-who Selam Yared since-find.PFV-3MSG.SBJ
təḥag^wis-a?
be.happy.GER-3FSG.SBJ
‘Who did Selam get excited because Yared found?’
- b. *ni-mən selam [siləzi-rəxəb-ə yared]
ACC-who Selam since-find.PFV-3MSG.SBJ Yared
təḥag^wis-a?
be.happy.GER-3FSG.SBJ
‘Who did Selam get excited because Yared found?’

Second, while the *wh*-movement strategy renders the construction ungrammatical irrespective of the inversion of the verb inside the embedded clause (35), this is not the case with the peripheral-*wh* (39): No complex NP island is observed with the peripheral-*wh* only when subject-verb inversion does not take place inside the embedded clause (39b).

(39) Complex NP island

- a. ?ʔintay selam [zi-s’əḥaf-ə səbʔay] rəxib-a?
what Selam REL-write.PFV-3MSG.SBJ man meet.GER-3FSG.SBJ
‘What did Selam meet a man wrote?’
- b. *ʔintay selam [səbʔay zi-s’əḥaf-ə] rəxib-a?
what Selam man REL-write.PFV-3MSG.SBJ meet.GER-3FSG.SBJ
‘What did Selam meet a man wrote?’

Finally, unlike the *wh*-movement strategy, the peripheral-*wh* strategy exhibits no subject island effects as the examples in (40a)-(41) show. Note, however, that a difference in ungrammaticality arises with the two nominal structures w.r.t. subject islands: the non-*nay*-marked does not seem to exhibit subject island effects. Compare (40a) with (40b).¹⁰

¹⁰Recall that possessive constructions in Tigrinya involve two independent strategies: The *nay*-marked is largely reserved for alienable possession, whereas the non-*nay*-marked is used for inalienable ones (see Gebregziabher (2012, 2013) for discussion). Both strategies are possible here because different thematic relationships, namely a possessor, a theme, or an agent, can be established with the head noun *picture*, and in many languages extraction of the possessor is only allowed Alexiadou et al. (2007).

(40) Subject island

- a. [nay mən siʔli] (ni-)Yared yə-ħəg^wis-u-wwo?
 NAY who picture ACC-Yared 3-please.GER-3MSG.SBJ-3MSG.OBJ
- b. *mən siʔli (ni-)Yared yə-ħəg^wis-u-wwo?
 who picture ACC-Yared 3-please.GER-3MSG.SBJ-3MSG.OBJ
 ‘Who did a picture of please Yared?’

(41) Sentential subject island

- ʔintay [yared mi-gziʔ-u] ni-selam
 what Yared NMLZ-buy-3MSG.SBJ ACC-Selam
 ʔəgrim-u-ll-a?
 surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ
 ‘What did that Yared bought surprise Selam?’

2.4.3 Wh-in-situ

On the other hand, with the standard wh-in-situ, where the wh-phrase remains in its base-generated position, no strong island effects are observed just as in the case of typical wh-in-situ languages, as the examples in (42)-(45) illustrate.

(42) Adjunct island

- selam [yared ni-mən siʔzi-rəxəb-ə] təħag^wis-a?
 Selam Yared ACC-who since-find.PFV-3MSG.SBJ be.happy.GER-3FSG.SBJ
 Lit. ‘Selam got excited because Yared found/met who?’

(43) Complex NP island

- selam [mən zi-s’əħaf-o məs’ħaf] gəziʔ-a?
 Selam who REL-write.PFV-3MSG.OBJ book buy.GER-3FSG.SBJ
 Lit. ‘Selam bought a book who wrote?’

(44) Subject island

- a. nay mən siʔli ni-Yared yə-ħəg^wus-o?
 NAY who picture ACC-Yared 3-please.IPFV-3MSG.SBJ
- b. [siʔli mən] ni-Yared yə-ħəg^wus-o
 picture mother-his ACC-Yared 3-please.IPFV-3MSG.SBJ-3MSG.OBJ
 Lit. ‘A picture of who pleases Yared?’

- (45) Sentential subject island
[yared ʔintay mi-gziʔ-u] ni-selam
Yared what NMLZ-buy-3MSG.SBJ ACC-Selam
ʔəgrim-u-ll-a?
surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ
Lit. ‘That Yared bought what surprised Selam?’

The fact that the above constructions are not sensitive to strong islands reinforces our initial analysis that this wh-interrogative strategy is indeed different from the other two.

With regard to the argument-adjunct asymmetry, Tigrinya shows a mixed picture.¹¹ The asymmetry holds with adjunct and (sentential) subject islands (compare (42) with (46), and (45) with (47)), but not with complex NP islands (compare (43) with (48)).¹²

From (46) and (47), we observe that extraction from adjunct islands and CP subjects is illicit, but no such restriction is observed with Complex NP islands, provided that there is no subject-verb inversion, as the examples in (48) illustrate.

- (46) Adjunct island
- a. ?? selam [yared məʃas siləzi-rəxəb-o] təħag^wis-a?
Selam Yared when with-find.PFV-3MSG.OBJ be.happy.GER-3FSG.SBJ
Lit. ‘Selam is happy because Yared met/found him when?’
- b. ?? selam [məʃas siləzi-rəxəb-o yared]
Selam why when-find.PFV-3MSG.SBJ Yared
təħag^wis-a?
be.happy.GER-3FSG.SBJ
Lit. ‘Selam is happy because Yared met/found him when?’

¹¹A reviewer asks whether adjuncts like ‘why’ exhibit a different pattern in Tigrinya as it does in other languages. Recall Tigrinya has two ‘why’ forms: while the form *nimintay* can be tolerated in-situ, the form *siləmintay* cannot (see Irurtzun 2021 for a comprehensive typological overview).

¹²In many languages, islands including sentential islands, can be ameliorated by using resumptive pronouns –pronouns that function as variables bound by an operator in an A'-position (see Rouveret 2011 for a comprehensive overview). Some of the classical examples come from Semitic languages (see Borer 1984 on Hebrew, Aoun et al. 2010 on Arabic, a.o.). In Tigrinya, the obligatory use of OMs is generally dependent on the specificity/definiteness of the noun phrase (Gebregziabher 2019), and more importantly, the presence of OMs inside islands does not remedy the construction.

(47) Sentential subject island

- a. ?? [yared fərəs məŋas mi-gzi?-u] ni-selam
 Yared horse when NMLZ-buy-3MSG.SBJ ACC-Selam
 ʔəgrim-u-ll-a?
 surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ
 Lit. ‘That he bought a horse when surprised Selam?’
- b. ?? [fərəs məŋas mi-gzi?-u yared] ni-selam
 horse when NMLZ-buy-3MSG.SBJ Yared ACC-Selam
 ʔəgrim-u-ll-a?
 surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ
 Lit. ‘That Yared bought a horse when surprised Selam?’

(48) Complex NP island

- a. selam [yared məŋas zi-s’əħhaf-o məs’ħaf]
 Selam Yared when REL-write.PFV-3MSG.OBJ book
 gəzi?-a?
 buy.GER-3FSG.SBJ
- b. ?? selam [məŋas zi-s’əħhaf-o məs’ħaf yared]
 Selam when REL-write.PFV-3MSG.OBJ book Yared
 gəzi?-a?
 buy.GER-3FSG.SBJ
 Lit. ‘Selam bought a book that Yared wrote when?’

Thus, by the strong island account, there is a distinction among the three wh-strategies: the wh-movement strategy exhibits island effects across all strong islands, but the peripheral-wh does so only with (sentential) subject and complex NP islands. With the wh-in-situ strategy, however, no island effects are observed except an argument-adjunct asymmetry with adjunct and subject islands.¹³

¹³In addition, Tigrinya exhibits some variation between adverbial wh-phrases, such as ‘when/where’, and purpose/reason wh-phrases, namely ‘how/why’, in the context of a sentential subject island. (i) illustrates that the island sensitivity fares better with the latter than the former.

- (i) a. ?? [fərəs siləmintay/kəməy mi-gzi?-u] ni-selam
 horse why/how NMLZ-buy-3MSG.SBJ ACC-Selam
 ʔəgrim-u-ll-a?
 surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ
 (Lit. ‘That he bought a horse how/why surprised Selam?’)

2.5 Weak islands: Wh-islands

In contrast to strong islands, “weak” islands are considered to be “selective” when it comes to island violations. Wh-islands are considered to be weak because some wh-phrases can extract out of certain types of islands but others cannot (see a.o. Rizzi 1990, Lasnik & Saito 1994, Szabolcsi 2006 for discussion).

- (49) a. ??What do you wonder why John bought?
b. *Why/Where do you wonder what John bought?

The same contrast is observed in a wh-in-situ language, such as Chinese (Huang 1982). Examples from Bayer & Cheng (2017).

- (50) Mandarin Chinese
Júdòu xiǎng-zhīdào shéi mǎi-le shéme (?)
Judou want-know who buy-ASP what
a. ‘Judou wonders who bought what.’
b. ‘For which y, y a thing, Judou wonders who bought y?’
c. ‘For which x, x a person, Judou wonders what x bought?’
- (51) Mandarin Chinese
Húfēi xiǎng-zhīdào shéi wèishéme shēngqì(?)
Hufei want-know who why get.angry
a. ‘Hufei wonders who gets angry why.’
b. ‘For which x, x a person, Hufei wonders why x gets angry?’
c. Intended but unavailable: ‘What is the reason x, Hufei wonders who gets angry for x?’

Turning back to Tigrinya, we examine whether weak islands have some bearing on the distinction among the different wh-interrogatives. Here we use the example in (52) as a baseline to test the effects of wh-islands. Notice that the complement of the matrix verb ‘wonder’ is an interrogative clause with adjuncts

-
- b. ? [fərəs məʃas/ʔabəy mi-gziʔ-u] ni-selam
horse where/when NMLZ-buy-3MSG.SBJ ACC-Selam
ʔəgrim-u-ll-a?
surprise.GER-3MSG.SBJ-APPL-3FSG.OBJ
Lit. ‘That Yared bought a horse when/where surprised Selam?’

Thus, there is a mild island effect with ‘when/where’ (compared to ‘why/how’) in Tigrinya. It appears, unlike in many other languages (see Irurtzun 2021 for a comprehensive list of examples), some interpretations of the in-situ ‘why/how’ are also not available in this context in Tigrinya.

ʔabʕidaga ‘at market’ and *niməmərək*’i ‘for graduation’ in their base-generated position.

- (52) yared [selam wiħbto ʔab-ʕidaga ni-məmərək’i ʔintə-gəziʔ-a]
 Yared Selam gift at-market for-graduation COMP-buy.GER-3FSG.SBJ
 yə-səllasil
 3-wonder.IPFV
 ‘Yared wonders [whether Selam bought a gift for graduation at a market]’

The first observation is that, with the wh-movement strategy, a direct object wh-phrase, such as *ʔintay* ‘what’, cannot be moved out of a wh-island or an embedded interrogative as the ungrammaticality of the example in (53) illustrates.

- (53) * ʔintay yə-səllasil [selam ʔabəy/məʕas ʔintə-gəziʔ-a]?
 what 3-wonder.IPFV Selam where/when COMP-buy.GER-3FSG.SBJ
 ‘What does he wonder [where/when Selam bought]?’

Second, wh-adjuncts, such as *ʔabəy* ‘where’ and *məʕas* ‘when’, compared to *siləmintay* ‘why’ and *kəməy* ‘how’, give rise to a mild wh-island effect (comparable to the English examples in (49)).

- (54) ?? ʔabəy/məʕas yə-səllasil [selam ʔintay ʔintə-gəziʔ-a]?
 where/when 3-wonder.IGER Selam what COMP-buy.GER-3FSG.SBJ
 ‘Where/when does he wonder [what Selam bought]?’
- (55) * siləmintay/kəməy yə-səllasil [selam ʔintay
 why/how 3-wonder.IPFV Selam what
 ʔintə-gəziʔ-a]?
 COMP-buy.GER-3FSG.SBJ
 ‘Why/how does he wonder [what Selam bought]?’

With the peripheral-wh strategy, movement of a wh-argument out of a wh-island generally has no effect (56), whereas dislocation of a wh-adjunct gives a mild weak island effect (this is especially true when we compare ‘where’ and ‘when’ (57) with ‘why’ (58)).

- (56) ʔintay [selam ʔabəy/məʕas ʔintə-gəziʔ-a] yə-səllasil?
 what Selam where/when COMP-buy.GER-3FSG.SBJ 3-wonder.IPFV
 ‘What does he wonder [where/when Selam bought]?’

- (57) ? ʔabəy/məʕas [selam ʔintay ʔintə-gəziʔ-a] yə-səllasil?
where/when Selam what COMP-buy.GER-3FSG.SBJ 3-wonder.IPFV
‘What does he wonder [where/when Selam bought?]
- (58) ?? siləmintay/kəməy [selam ʔintay ʔintə-gəziʔ-a]
why/how Selam what COMP-buy.GER-3FSG.SBJ
yə-səllasil?
3-wonder.IPFV
‘Why/how does he wonder [what Selam bought?]

Finally, with the wh-in-situ strategy, while in-situ arguments do not give rise to weak island effects, in-situ wh-adjuncts show a mild effect, particularly with *siləmintay* ‘why’ or *kəməy* ‘how’ (59), but not with *məʕas* ‘when’ or *ʔabəy* ‘where’ (59).

- (59) [selam ʔabəy/məʕas ʔintay ʔintə-gəziʔ-a] yə-səllasil?
Selam where/when what 3-wonder.IPFV COMP-buy.IPFV-3FSG.SBJ
‘Where/when does he wonder [what Selam bought?]
- (60) ? [selam siləmintay/kəməy ʔintay ʔintə-gəziʔ-a]
Selam why/how what COMP-buy.GER-3FSG.SBJ
yə-səllasil?
3-wonder.IPFV
‘Why/how does he wonder [what Selam bought?]

Thus, by the count of weak wh-islands, it appears that in Tigrinya the three wh-interrogatives seem to contrast in exhibiting some minor argument-adjunct asymmetry, including a contrast between adjuncts like ‘when/where’ and ‘how/why’.

2.6 Interim summary

Based on the above discussion, we can make the following observations: First, argument-adjunct asymmetries in both strong and weak islands are different from those observed in a typical wh-movement language, such as English, and in a wh-in-situ language, namely Chinese. For example, under the strong island constructions, wh-movement and peripheral-wh strategies do not show the asymmetry, but wh-in-situ does (save the CNP). On the other hand, under the weak islands, the adjunct-argument asymmetry appears to hold across the three strategies (often weaker or milder in some cases), but this is categorically different in

both English and Chinese (see Szabolcsi 2006 and references cited therein for an overview). In the literature, such asymmetries are often characterized in pragmatic or syntactic terms, such as nominals vs. adverbials (e.g., Huang 1982) or referential/individuals vs. non-referential/individuals (e.g., Cinque 1990), although many of the explanations still remain inadequate (see den Dikken 2018 for a recent overview).¹⁴ Therefore, we suspect the nature of wh-expressions could be key in accounting for the observed contrasts.

Second, abstracting away from the argument-adjunct asymmetry issue, the construction we dubbed “wh-movement” shows the standard properties of typical wh-movement languages (namely, English). Similarly, the Tigrinya “wh-in-situ” construction shares most of its properties with bona-fide wh-in-situ languages (such as Chinese). One widely adopted approach is *unselective binding*, according to which in-situ adjunct wh-phrases that are bound by an operator in their scope position must raise at LF, thereby inducing island violations (a.o., Pesetsky 1987, 2000, Tsai 1994, 2008). The fact that the Tigrinya data exhibit a consistent pattern may lead one to claim that this approach is sufficient to license Tigrinya wh-in-situ arguments as well as wh-adjuncts discussed in this paper.

Our “peripheral-wh construction” contrasts with wh-movement in not systematically showing island effects. This suggests that even if a wh-dependency exists in these constructions, perhaps they may not be derived by A'-movement (presumably some pragmatic factors may be at play). Finally, as for the complex NP constraint (CNPC) it is not obvious how the pattern emerges. Recall, that peripheral-wh exhibits CNPC effects (but no adjunct or subject island effects), whereas wh-in-situ shows no CNPC effects (but does show adjunct and subject island effects). We suspect that this could be something to do with the syntax of relativization (cf. Cinque 2010 on some ‘apparent’ violations of the CNPC). We leave these issues open here until the CNPC facts in the contexts of NP + clausal complement is fully uncovered in Tigrinya. Table 1 summarizes the results obtained so far.¹⁵ Note that with respect to Complex Noun phrases, extraction of the object is fine for peripheral-wh, but extraction of the subject is not.

¹⁴The fact that Tigrinya does not exhibit strong adjunct-argument asymmetry could be something to do with the nature of the wh-items themselves rather than their role (as the argument-adjunct) per se. In some wh-in-situ languages wh-items act like variables, whereas in wh-movement languages they generally act like pronominals (see Rizzi 1990, Szabolcsi & den Dikken 2003 for discussion). Thus, one way of interpreting the Tigrinya ‘why/how’ pattern is to say that they are reason/purpose wh-phrases, and that is what makes them less/unextractable from weak islands.

¹⁵In the table, “mild” refers to the judgement less grammatical signaled by ?/?/?.

Table 1: Diagnosing the syntactic properties of wh-interrogatives

		English	Chinese	Tigrinya		
		Wh-mvt	Wh-in-situ	Wh-mvt	Periph-wh	Wh-in-situ
Long-distance dependency		yes	yes	yes	yes	yes
Reconstruction effect		yes	NA	yes	yes	NA
WCO effect		yes	yes	yes	yes	(mild)
Island effect /argument	Adjunct	yes	no	yes	no	no
	CNP	yes	no	yes	no	no
	Subject	yes	no	yes	no	no
Island effect /adjunct	Adjunct	yes	yes	-	-	yes
	CNP	yes	yes	-	-	no
	Subject	yes	yes	-	-	yes
Wh-island effect /argument		no	no	yes	(mild)	no
Wh-island effect /adjuncts		yes	yes	(mild)	no	(no/mild)

In what follows, we explore whether there are some semantic restrictions in the different syntactic wh-interrogatives we uncovered so far.

3 Interpretive properties

In our effort to characterize and delimit the patterns of wh-interrogative strategies in Tigrinya, we explore whether there are interpretive properties associated with the different word order configurations. In this regard, we follow previous literature (see É. Kiss 2010, Horvath 2013 on Hungarian, Bayer & Cheng 2017 on Chinese, Duguine & Irurtzun 2014 on Basque, Faure & Palasis 2021 on French, a.o.) and discuss interpretive properties, namely, presuppositionality and exhaustivity readings that have been often used to distinguish standard wh-in-situ from wh-movement (as well as focus movement) questions. See Keupdjio (2020) for a recent adaptation of the same idea on Medumba (Grassfields Bantu, spoken in Cameroon) to separate wh-in-situ, wh-movement and focus movement questions.

3.1 Exhaustivity

Exhaustivity entails the maximum set of entities or individuals the predicate satisfies in a given question. In the case of a *wh*-interrogative, exhaustivity often entails exclusivity or the exclusion of certain alternative answers in a given context (see Faure & Palasis 2021 for a recent discussion based on colloquial French). One of the ways in which exhaustivity is expressed is by using additive particles such as *else*, *other*, *also*, etc., and when such particles are associated with *wh*-phrases, as in (*who else*, *what else*, etc.), they presuppose a non-exhaustive or non-exclusive list of answers. In other words, such elements are incompatible in an exhaustive question (cf. É. Kiss 2010, Keupdjio 2020). For example, in Chinese, an answer with an additive particle *yě* ‘also’ cannot be felicitous for a contrastively focused *wh*-question (61a) that requires a unique answer because that can give rise to the exhaustivity reading that excludes a list answer (61b), whereas the same answer for the normal *wh*-in-situ question is felicitous because it does not result in exhaustivity reading that excludes a unique answer. See Pan (2019) for a recent discussion on Chinese.

(61) Mandarin Chinese (Cheung 2008: 54 cited in Pan 2014: 23)

- a. Q: (Shì) [shénme dōngxi]_{C-FOC} Mǎlì mǎi-le?
 be what thing Mary buy-Perf
 ‘What thing(s) was it that Mary bought?’
- b. A: *Shì [màozi]_{C-FOC}, tā mǎi-le. Shì [wàitào]_{C-FOC}, tā yě
 be hat she buy-Perf be coat she also
 mǎi-le.
 buy-Perf
 ‘It was a hat that she bought, and it was a coat that she also bought.’

In Tigrinya, there is an additive particle *kali?* ‘else/other’ that marks exhaustivity, and when *wh*-questions are associated with this additive particle, some differences among the three *wh*-interrogative strategies arise. First, notice that the additive particle can appear either to the right or left of the *wh*-phrase (62).

- (62) a. *kali?* mən məs’i?-u?
 else who come.GER-3MSG.SBJ
- b. mən *kali?* məs’i?-u?
 who else come.GER-3MSG.SBJ
 ‘Who else came?’

Second, when the additive particle precedes the wh-phrase, the wh-movement strategy appears somehow deviant for some speakers; however, no observable difference between the two other strategies is exhibited. Both appear felicitous (63b-c).

- (63) a. Wh-movement
 ? kali? nīmən sədid-a selam dəbdabe?
 else who send.GER-3FSG.SBJ selam letter
- b. Peripheral-wh
 kali? nīmən selam dəbdabe sədid-a?
 else who Selam letter send.GER-3FSG.SBJ
- c. Wh-in-situ
 selam dəbdabe kali? nīmən sədid-a?
 Selam letter else who send.GER-3FSG.SBJ
 ‘Who else did Selam send a letter to?’

On the other hand, when the additive particle appears to the right of the wh-phrase, while the wh-in-situ is felicitous, the peripheral-wh and wh-movement appear deviant (64). In this respect, the additive particle as an exhaustivity marker appears to differentiate wh-in-situ from peripheral-wh and wh-movement constructions.

- (64) a. Wh-movement
 ?? nīmən kali? sədid-a selam dəbdabe?
 who else send.GER-3FSG.SBJ Selam letter
- b. Peripheral-wh
 ? nīmən kali? selam dəbdabe sədid-a?
 who else Selam letter send.GER-3FSG.SBJ
- c. Wh-in-situ
 selam dəbdabe nīmən kali? sədid-a?
 Selam letter who else send.GER-3FSG.SBJ
 ‘Who else did Selam send a letter?’

In many respects, the deviance of the above constructions with the peripheral-wh and wh-movement constructions recalls what É. Kiss (1998) labels exhaustive identification (see also Horvath 2010 on Hungarian), according to which additive markers are incompatible with contrastive focus due to their semantic requirement for exhaustive list answers. In Tigrinya, contrastive focus is often expressed with clefts, and clefts in Tigrinya are introduced by a copula *?iyy-* preceded by the focalized element, as illustrated below:

- (65) a. yared ʔiyy-u mäs'it-u
 Yared be-3MSG.SBJ give.GER-3MSG.SBJ
 'It was Yared who came.'
- b. məkina ʔiyy-u gəziʔ-u
 car be-3MSG.SBJ buy.GER-3MSG.SBJ
 'It was a car that he bought.'

In the above cleft constructions, with the emphasis on *Yared* and *a car*, the sentences assert that Yared came and he bought a car, but they also express that the only person who came is Yared and the only thing that he bought is a car. Thus, the list of answers, namely, a car and Yared, exhaustively identify the relevant entities that have the property of the individuals who came and were bought, respectively.

According to É. Kiss (1998), some lexical items such as *else*, *even*, *also*, *again*, etc. are incompatible with bona-fide contrastive focus constructions, such as clefts (e.g., **It was even/also/else a hat that John picked out for himself*), due to their semantic properties.

In Tigrinya, identificational *it*-clefts, similar to the *wh*-movement (and peripheral-*wh*) constructions, are incompatible with additive markers such as 'else/other'.

- (66) ?? ni-mən kaliʔ ʔiyy-a salam dəbdabe sədid-a?
 ACC-who other be-3FSG.SBJ Selam letter send.GER-3FSG.SBJ
 'Who else is it that Selam sent a letter to?' Cleft construction

Thus, by the exhaustivity account, peripheral-*wh* and *wh*-movement constructions seem to be different from *wh*-in-situ strategies in Tigrinya, and they appear to exhibit semantic similarity with *wh*-clefts. This also appears consistent with what Keupdjio (2020) observed in Bamileke Medumba, where *ex-situ wh*-questions are exhaustive, but their *in-situ* counterparts are not.

3.2 Presuppositionality

In languages such as French, *wh*-clefts are associated with an existential presupposition. In turn, *wh*-movement or *wh*-in-situ constructions are not necessarily associated with such a presupposition. This is shown by the infelicity in answering 'nothing' to the cleft interrogative and its felicity to a *wh*-in-situ question, as illustrated below (examples from Shlonsky 2012; see also Duguine & Irurtzun 2014 for similar observation based on Basque).

(67) Wh-cleft (French)

- a. Q: C'est quoi que tu fais dans la vie?
it's what that you do in the life
'What is it that you do in life?'
- b. A: #Rien. 'Nothing'

(68) Wh-in-situ (French)

- a. Q: Tu fais quoi dans la vie?
you do what in the life
'What do you do in life?'
- b. A: Rien. 'Nothing'

In Tigrinya, there is some variability in the acceptability of denial responses to different types of wh-questions: while denial responses to wh-in-situ and wh-movement questions are well-formed (69-70), denial responses to the peripheral-wh questions are not (71).

(69) Wh-movement

- a. Q: ni-mən sədid-u yared ni-ʕdaga
ACC-who send.GER-3MSG.SBJ Yared to-market
'Who did Yared send to the market?'
- b. A: ni-walaḥadə/nimanim
no-one/nobody
'No one/nobody'

(70) Wh-in-situ

- a. Q: yared ni-mən ni-ʕdaga sədid-u?
Yared ACC-who to-market send.GER-3MSG.SBJ
'Who did Yared send to the market?'
- b. A: ni-walaḥadə/ni-manim
ACC-no.one/ACC-nobody
'Nobody/no one'

(71) Peripheral-wh

- a. Q: ni-mən yared ni-ʕdaga sədid-u?
ACC-who Yared to-market send.GER-3MSG.SBJ
'Who did Yared send to the market?'

- b. A: #ni-walaḥadə/ni-manim?
ACC-no.one/ACC-nobody
'Nobody/no one'

Again, there is no contrast between *wh*-movement and *wh*-in-situ constructions. However, peripheral-*wh* constructions appear different from the other two because they pattern together with Tigrinya (and French) *wh*-clefts as they are associated with an existential presupposition.

(72) Cleft-Construction

- a. Q: mən ʔiyy-u kəyd-u ni-ʔidaga?
who be-3MSG.SBJ go.GER-3MSG.SBJ to-market
'Who is it that went to the market?'
- b. A: #walaḥadə/manim
no-one/-body
'Nobody/no one'

Thus, it appears that, once again, the peripheral-*wh* is different from the *wh*-in-situ and *wh*-movement in being presuppositional (parallel to a cleft-construction).

3.3 Summary of interpretive properties

In this section we discussed the interpretive properties of *wh*-interrogatives in Tigrinya. We found that while some Tigrinya *wh*-interrogatives seem to exhibit some interpretive differences with respect to exhaustivity and presuppositionality, others do not. Consistent with our original assumption, although the in-situ and *wh*-movement strategies do not significantly differ semantically, the peripheral-*wh* pattern differs from the other two strategies in terms of these semantic properties.

Table 2 summarizes both the syntactic and semantic properties of Tigrinya *wh*-interrogatives.

Table 2: Diagnosing the interpretive properties of *wh*-interrogatives

	English	Chinese	Tigrinya		
			Wh-mvt	Wh-peri	Wh-in-situ
Exhaustivity	no	no	yes	yes	no
Presuppositionality	no	no	no	yes	no

We tentatively suggest that the wh-fronting of the peripheral-wh strategy type (different from the standard wh-movement type) can be derived from a different type of structure (maybe driven by a feature other than [WH]) or a base-generated structure of a different question-formation type, which would account for the exhaustive and existential inferences the construction has (see Duguine & Irurtzun 2010 on Basque, Horvath 2013 on Hungarian, Keupdjio 2020 on Medumba, Faure & Palasis 2021 on Colloquial French, among others, for a similar approach). In particular, the Tigrinya peripheral-wh strategy could be treated parallel to what Duguine & Irurtzun (2014) called a “reinforced” wh-question in Labourdin (Northern dialects) Basque. They termed it ‘reinforced’ because it has a marked focus associated (with presuppositionality and contrastive focus) to it. Faure & Palasis (2021) also show that ex-situ interrogatives in French with no inversion (V-to-C movement), such as *Où elle va?* (as opposed to *Où va-t-elle?*) ‘where does she go?’, are exhaustive/exclusive and should not be driven by the standard wh-feature checking mechanism (see Cheng & Rooryck 2000, Mathieu 2016 for a recent prosody-based account). While these are suggestive potential accounts for Tigrinya, the exact analysis has to remain open for further investigation.

4 Conclusion

In this paper, we set out to describe and analyze wh-interrogatives in Tigrinya. Using a number of syntactic and semantic properties, we have shown that Tigrinya wh-interrogatives involve (at least) three independent strategies: (i) wh-movement, (ii) peripheral-wh, and (iii) wh-in-situ. While the first involves movement of the wh-phrase accompanied by V-to-C movement, exhibiting what appears like a V2-effect, the others do not.

In many respects, Tigrinya can hardly be considered either a strict wh-movement or an in-situ language; thus, standard syntactic theories including parametric approaches, such as (i) feature strength (Chomsky 1995), (ii) phase-based (Chomsky 2001), (iii) clause typing (cf. Cheng 1991, Cheng & Rooryck 2000) or (iv) externalization (as in Distributed Morphology, Richards 2010), cannot straightforwardly account for the data in Tigrinya, for the simple reason that Tigrinya wh-interrogatives exhibit mixed properties, not only with respect to violations of (strong) islands but also reconstruction and WCO effects. It is beyond the scope of this paper to delve into the pros and cons of these analyses but it will be a fruitful avenue to explore.

Abbreviations

Abbreviations in this chapter follow the Leipzig Glossing Rules, with the following additions:

A	answer	GER	gerund(ive)	Q	question
---	--------	-----	-------------	---	----------

Acknowledgements

We thank two anonymous reviewers for their helpful comments and suggestions. Special thanks to the Tigrinya consultants, and participants of the ACAL53 conference for their comments and questions. We are particularly indebted to Sharon Rose for her excellent editorial reviews. We also would like to thank participants of the IKER colloquium, particularly Aritz Irurtzun and Alejo Alcaraz, for helpful questions and comments. This research is partly supported by the CNRS project (*Uncovering V2 effects: An interface-based typology*) granted to the PI, Maia Duguine (ANR18-FRAL0006). The usual disclaimer applies.

References

- Abels, Klaus & Peter Muriungi. 2008. The focus marker in Kiitharaka: Syntax and semantics. *Lingua* 118(5). 687–731.
- Alexiadou, Artemis, Liliane Haegeman & Melita Stavrou. 2007. *Noun phrase in the generative perspective*. Berlin & New York: De Gruyter Mouton.
- Amaechi, Mary & Doreen Georgi. 2020. On optional wh-/focus fronting in Igbo: A SYN-SEM-PHON interaction. *Zeitschrift für Sprachwissenschaft* 39(3). 299–327.
- Aoun, Joseph, Elabbas Benmamoun & Lina Choueiri. 2010. *Arabic syntax*. Cambridge: Cambridge University Press.
- Bayer, Josef & Lisa Lai-Shen Cheng. 2017. Wh-in-situ. In Martin Everaert & Henk C. van Riemsdijk (eds.), *The Wiley Blackwell companion to syntax. Second edition*, 1–44. Oxford: John Wiley & Sons.
- Boeckx, Cedric. 2008. Islands. *Language and Linguistics Compass* 2(1). 151–167.
- Borer, Hagit. 1984. *Parametric syntax: Case studies in Semitic and Romance languages*. Boston: De Gruyter Mouton.
- Bošković, Željko. 2015. Wh-movement. In Antonio Fábregas, Jaume Mateu & Michael T. Putnam (eds.), *Contemporary linguistic parameters*, 251–279. London: Bloomsbury Publishing.

- Bruening, Benjamin & Eman Al Khalaf. 2019. No argument-adjunct asymmetry in reconstruction for Binding Condition C. *Journal of Linguistics* 55(2). 247–276.
- Cheng, Lisa Lai-Shen. 1991. *On the typology of wh-questions*. MIT. (Doctoral dissertation).
- Cheng, Lisa Lai-Shen & Johan Rooryck. 2000. Licensing wh-in-situ. *Syntax* 3(1). 1–19.
- Cheung, Candice Chi-Hang. 2008. *Wh-fronting in Chinese*. University of Southern California. (Doctoral dissertation).
- Chomsky, Noam. 1977. On wh-movement. In Peter W. Culicover, Thomas Wasow & Adrian Akmajian (eds.), *Formal syntax*, 71–132. New York: Academic Press.
- Chomsky, Noam. 1981. *Lectures on binding and government*. Dordrecht: Foris.
- Chomsky, Noam. 1986. *Barriers* (Linguistic Inquiry Monographs 13). Cambridge, MA: The MIT Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: The MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 1–52. Cambridge: MIT Press.
- Cinque, Guglielmo. 1990. *Types of A'-Dependencies*. Cambridge, MA: The MIT Press.
- Cinque, Guglielmo. 2010. On a selective “violation” of the complex NP constraint. In C. Jan-Wouter Zwart & Mark de Vries (eds.), *Structure preserved: Studies in syntax for Jan Koster* (Linguistik Aktuell/Linguistics Today 164), 81–89. Amsterdam: John Benjamins.
- den Dikken, Marcel. 2018. *Dependency and directionality*. Cambridge: Cambridge University Press.
- Duguine, Maia & Aritz Irurtzun. 2010. Opérateurs d'exclusivité dans les questions et réponses en basque. *Revue de Sémantique et Pragmatique* 27. 105–117.
- Duguine, Maia & Aritz Irurtzun. 2014. From obligatory WH-movement to optional WH-in-situ in Labourdin Basque. *Language* 90(1). 1–30.
- É. Kiss, Katalin. 1998. Identificational focus versus information focus. *Language* 74(2). 245–273.
- É. Kiss, Katalin. 2010. Structural focus and exhaustivity. In Malte Zimmermann & Caroline Féry (eds.), *Information structure: Theoretical, typological and experimental perspectives*, 64–88. Oxford: Oxford University Press.
- Faure, Richard & Katerina Palasis. 2021. Exclusivity! Wh-fronting is not optional wh-movement in Colloquial French. *Natural Language & Linguistic Theory* 39(1). 57–95.
- Fox, Danny & Jon Nissenbaum. 2004. Condition A and scope reconstruction. *Linguistic Inquiry* 35(3). 475–485.

- Gavruseva, Elena. 2000. On the syntax of possessor extraction. *Lingua* 110(10). 743–772.
- Gebregziabher, Keffyalew. 2012. The syntax of alienable and inalienable possession in Tigrinya. *Journal of Afroasiatic Languages* 5(1). 153–194.
- Gebregziabher, Keffyalew. 2013. *Projecting possessors: A morphosyntactic investigation of nominal possession in Tigrinya*. University of Calgary. (Doctoral dissertation).
- Gebregziabher, Keffyalew. 2019. Clitics or agreement markers: A view from Tigrinya clausal possession and modal necessity. In Akinbiyi, Akinlabi, Lee Bickmore, Michael Cahill, Michael Diercks, Laura Downing, James Essegbey, Katie Franich, Laura McPherson and Sharon Rose (ed.), *Celebrating 50 years of ACAL: Selected papers from the 50th Annual Conference on African Linguistics*, 89–136. Berlin: Language Science Press.
- Gebregziabher, Keffyalew. 2023. *Clausal structures and v2: A Tigrinya case study*. Unpublished Ms. IKER (Centre de Recherche sur la langue et les textes basques).
- Green, Melanie & Philip J. Jaggar. 2003. Ex-situ and in-situ focus in Hausa. In Jacqueline Lecarme (ed.), *Research in Afroasiatic Grammar II: Selected papers from the Fifth Conference on Afroasiatic Languages, Paris, 2000* (Current Issues in Linguistic Theory), 187–214. Amsterdam: John Benjamins Publishing Company.
- Hetzron, Robert. 1972. *Ethiopian Semitic: Studies in classification*. Manchester: Manchester University Press.
- Horvath, Julia. 2010. Discourse-features, syntactic displacement and the status of contrast. *Lingua* 120(6). 1346–1369.
- Horvath, Julia. 2013. Focus, exhaustivity and the syntax of wh-interrogatives. In Johan Brandtler, Valéria Molnár & Christer Platzack (eds.), *Approaches to Hungarian*, vol. 13, 97–132. Amsterdam: John Benjamins.
- Huang, C-T. James. 1982. Move wh in a language without wh-movement. *The Linguistic Review* 1(4). 369–416.
- Irurtzun, Aritz. 2021. Why questions break the residual V2 restriction (in Basque and beyond). In Gabriela Soare (ed.), *Why is ‘why’ unique?: Its syntactic and semantic properties*, 63–114. Boston: De Gruyter Mouton.
- Keupdjio, Hermann. 2020. *The syntax of A’-dependencies in Bamileke Medumba*. University of British Columbia. (Doctoral dissertation).
- Ko, Heejeong. 2005. Syntax of why-in-situ: Merge into [Spec, CP] in the overt syntax. *Natural Language & Linguistic Theory* 23(4). 867–916.
- Kogan, Leonid E. 1997. Tigrinya. In Robert Hetzron (ed.), *The Semitic languages*, 424–445. London: Routledge.

- Lasnik, Howard & Mamoru Saito. 1994. *Move alpha: Conditions on its application and output* (Current Studies in Linguistics 22). Cambridge, MA: The MIT Press.
- Mathieu, Eric. 2016. The wh parameter and radical externalization. In Olga Fernández-Soriano Luis Eguren & Amaya Mendikoetxea (eds.), *Rethinking parameters*, 252–290. Oxford: Oxford University Press.
- Pan, Victor. 2014. Wh-ex-situ in Mandarin Chinese: Mapping between information structure and split CP. *Linguistic Analysis* 39. 371–414.
- Pan, Victor. 2019. *Architecture of the periphery in Chinese: Cartography and minimalism*. London: Routledge.
- Pesetsky, David. 1987. Binding problems with experiencer verbs. *Linguistic Inquiry* 18(1). 126–140.
- Pesetsky, David. 2000. *Phrasal movement and its kin* (Linguistic Inquiry Monographs 37). Cambridge, MA: MIT press.
- Postal, Paul M. 1993. Remarks on weak crossover effects. *Linguistic Inquiry* 24(3). 539–556.
- Reinhart, Tanya & Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24(4). 657–720.
- Richards, Norvin. 2010. *Uttering trees* (Linguistic Inquiry Monographs 56). Cambridge, MA: The MIT Press.
- Rizzi, Luigi. 1990. *Relativized minimality* (Linguistic Inquiry Monographs 16). Cambridge, MA: The MIT Press.
- Ross, John. 1967. *Constraints on variables in syntax*. Massachusetts Institute of Technology. (Doctoral dissertation).
- Rouveret, Alain. 2011. Some issues in the theory of resumption: A presepective on early and recent research. In Alain Rouveret (ed.), *Resumptive pronouns at the interfaces* (Language faculty and beyond 5), 1–62. Amsterdam: John Benjamins.
- Sabel, Joachim & Jochen Zeller. 2006. wh-question formation in Nguni. In John P. Hutchison John Mugane & Dee A. Worman (eds.), *Selected proceedings of the 35th Annual Conference on African Linguistics*, 271–283. Somerville, MA, USA: Cascadilla Proceedings Project.
- Safir, Ken. 2004. *The syntax of anaphora*. Oxford: Oxford University Press.
- Safir, Ken. 2017. Weak crossover. In Martin Everaert & Henk van Reimsdijk (eds.), *The Wiley Blackwell companion to syntax*, 2nd edn., 1–40. New York: Wiley-Blackwell.
- Shlonsky, Ur. 2012. Notes on wh in situ in French. In L. Brugé., Anna Cardinaletti, G. Giustic, N. Munaro & C. Poletto (eds.), *Functional heads: The cartography of syntactic structures*, vol. 7, 242–252. Oxford: Oxford University Press.

- Szabolcsi, Anna. 2006. Strong vs. weak islands. In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell companion to syntax*, vol. 4, 479–531. Oxford: Wiley-Blackwell.
- Szabolcsi, Anna & Marcel den Dikken. 2003. Islands. In Lisa Lai-Shen Cheng & Rintje Sybesma (eds.), *The second glot international state-of-the-article Book*, 213–240. Berlin: De Gruyter.
- Torrence, Harold & Jason Kandybowicz. 2015. Wh-question formation in Krachi. *Journal of African Languages and Linguistics* 36(2). 253–285.
- Tsai, Wei-Tien Dylan. 1994. On nominal islands and LF extraction in Chinese. *Natural Language & Linguistic Theory* 12(1). 121–175.
- Tsai, Wei-Tien Dylan. 2008. Left periphery and how-why alternations. *Journal of East Asian Linguistics* 17. 83–115.
- Wasow, Thomas. 1979. *Anaphora in Generative Grammar*. Ghent: E. Story-Scientia.
- Zentz, Jason. 2016. *Forming wh-questions in Shona: A comparative Bantu perspective*. Yale University. (Doctoral dissertation).