

Chapter 2

Wh Phrases that aren't: the *u*-Construction

2.1 Introduction

2.1.1 Overview

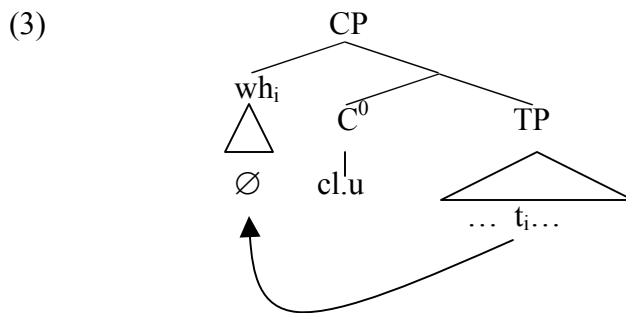
This chapter concerns the *u*-construction, first introduced in Chapter 1. Most basic wh questions in English can be translated into Wolof in either of two ways. The *u*-forms occur in the in *u*-construction, while the *an*-forms occur elsewhere:

- | | |
|----------------------------------|---------|
| (1) k.u xale bi dóór | u-form |
| cl.u child the hit | |
| “who did the child hit?” | |
|
 | |
| (2) k.an l-a xale bi dóór | an-form |
| cl-an xpl-a child the hit | |
| “who is it that the child hit?” | |

In the *u*-construction in (1), the putative wh-word, *k.u*, is composed of a class marker, *k-*, and *-u-*. In (2), the wh-word, *k-an*, an *an*-form, is composed of a class marker followed by *-an*, “which”. While the *u*-form and *an*-form at first appear to be simply morphological variants, they are quite distinct syntactically. The *an*-form appears in a cleft in (2) while the *u*-form occurs in a fronting construction in (1). Given a decompositional view of morphology, the fact that they systematically differ morphologically, suggests distinct syntactic derivations. The goal of this chapter is to understand how the morphosyntax conspires to produce the observed properties of the *u*-construction and how the construction types arise from their component parts. Of course, this cannot be done without first understanding exactly what those component parts are and where they are introduced into the derivation. Anticipating future developments, I will conclude that the *u*- and *an*-forms are not merely morphological

variants, but that their distributions come about precisely because of their distinct syntactic compositions.

The basic idea of the analysis that I will argue for here is that the *u*-forms are not *wh*-words (i.e. constituents drawn from the lexicon). Instead, they are agreeing complementizers which merge with a TP complement. They attract a silent *wh*-phrase to their specifier, which triggers class agreement on *-u-*, yielding the surface form, *cl.u*. In addition, the *u*-forms have a particular phonological property: they are weak, i.e. clitics. This is represented as:



The analysis is motivated from four lines of evidence. First, the *u*-forms do not have the distribution of lexical DPs, unlike the *an*-forms. Second, the *-u-* of the *u*-form distributes like a C^0 . Third, the agreement marker agrees with a DP, either silent or overt. Finally, the *u*-forms and *an*-forms are sensitive to both general and language specific constraints on movement.

The discussion in the chapter is organized around showing that *-u-* is a C^0 , and that there is a silent *wh*-phrase, merged in an argument/adjunct position TP which undergoes raising to SpecCP, just like overt *wh*-phrases. I first describe the distribution of the *u*-forms rather broadly, that is, in terms of the arguments that may be encoded with these forms. This leads to a discussion and description of the morphology and syntax of the clause type associated with the *u*-forms. I then compare and contrast the *u*-forms and

an-forms showing that *an*-forms pattern with lexical DPs, but the *u*-forms do not. I use the latter properties to elucidate the categorical status of the *u*-forms. Evidence is then presented for the existence of a silent wh-phrase and for movement in the *u*-construction. Finally, I present some outstanding problems for future research.

2.1.2 *The distribution of the u-forms*

The *u*-forms can be used to form wh questions from subjects, objects, adjuncts, etc. as long as it corresponds to a “simple” Wh phrase, e.g. “who”, “what”, “how” (although I discuss exceptions later):

- | | |
|--|---------------------|
| (4) a. k.u togg ceeb bi ak jën wi
cl.u cook rice the and fish the
“who cooked the rice and the fish?” | subject |
| b. y.u jigéen ji togg
cl.u woman the cook
“what(pl) did the woman cook?” | direct object |
| c. f.u jigéen ji togg-e ceeb bi ak jën wi
cl.u woman the cook-loc rice the and fish the
“where did the woman cook the fish and the rice?” | locative adjunct |
| d. ñ.u ngeen ubbé-él bunt bi
cl.u 2pl open-ben door the
“who(pl) did y’all open the door for?” | applied object |
| e. l.u Isaa ubbé-é bunt yi
cl.u isaa open-instr door the.pl
“what did Isaa open the doors with?” | instrumental object |

An *u*-form can be formed with any of the noun class markers, including the defective noun classes (*b-*, *w-*, *m-*, *k-*, *ñ-*, *y-*, *l-*, *s-*, *f-*, *c-*, *n-*, *g-*, *j-*). This can be seen in (4)a-e and (5), where various noun class markers occur preceding *-u-*. In (4)a, where the class marker is *k-*, the question is interpreted as asking about *who*. This is because the default singular human noun class is the *ki*-class. Similarly, (4)c, where the class marker is *f-*, the question is interpreted as asking *where*. In (5) are examples from some of the

non-default noun classes. They are interpreted as asking about an item from that noun class. Thus, the meaning is recovered from the agreement markers:

- (5) a. **w.u** ngeen bëgg-ë jënd wi-class
 cl.u 2pl want-a buy
 “what (w-class item) do y’all want to buy?”
- b. **m.u** mu lekk mi-class
 cl.u 3sg eat
 “what (m-class item) did he eat?”

The *u*-forms are found in “*u*-chains” of two types. In the simple case, *u*-chains consist of multiple *u*-forms spread over multiple clauses, one per clause:

- (6) a. [_{CP} **k.u** Isaa foog [_{CP} **k.u** lekk gato bi]] subject
 cl.u isaa think cl.u eat cake the
 “who does Isaa think ate the cake?”
- b. [_{CP} **f.u** Isaa wax ne [_{CP} **f.u**-ma jàng-e taalif ya]] adjunct
 cl.u isaa say that cl.u-1sg read-loc poem the.pl
 “where did Isaa say that I read the poem?”

The second type of *u*-chain, a “mixed *u*-chain” consists of an *an*-form obligatorily in the highest position, and *u*-forms lower down:

- (7) a. [_{CP} **ñ.an** l-a-nu gëm ne [_{CP} **ñ.u** Isaa bëgg]] direct object
 cl.*an* xpl-a-1pl believe that cl.u isaa love
 “who(pl) do we believe that Isaa loves?”
- b. [_{CP} **k.an** ngeen defe ne [_{CP} **k.u** ñu togg-al démb]] benefactive object
 cl.*an* xpl+a+2pl think that cl.u 3pl cook-ben yesterday
 “who do y’all think that they cooked for yesterday?”

Both types of *u*-chains can involve any argument or adjunct. Note that in (6)b and (7)a-b, the (verb-like) subordinator *ne* is present along with the *u*-forms in the left periphery. It was noted in Chapter 1 that Wolof has a very rich complementizer system. Thus, the co-occurrence of *ne* and what I will argue is another complementizer is not problematic.

Indirect wh questions can be formed with *u*-forms:

- (8) bēgg-na-a xam [CP **n-u**-mu-ko def-e]
 want-na-1sg know cl.u-3sg-3sg do-mann
 “I wonder how he did it”

Echo questions can also be asked with the *u*-construction:

- (9) a. gis-na-a #&%@ statement
 see-na-1sg
 “I saw #&%@”
 b. k.o o gis ? echo question
 cl.u 2sg see
 “you saw who?”

It is important to note that *u*-forms only occur with one type of TP, that found with relative clauses, which also contain an *-u*.

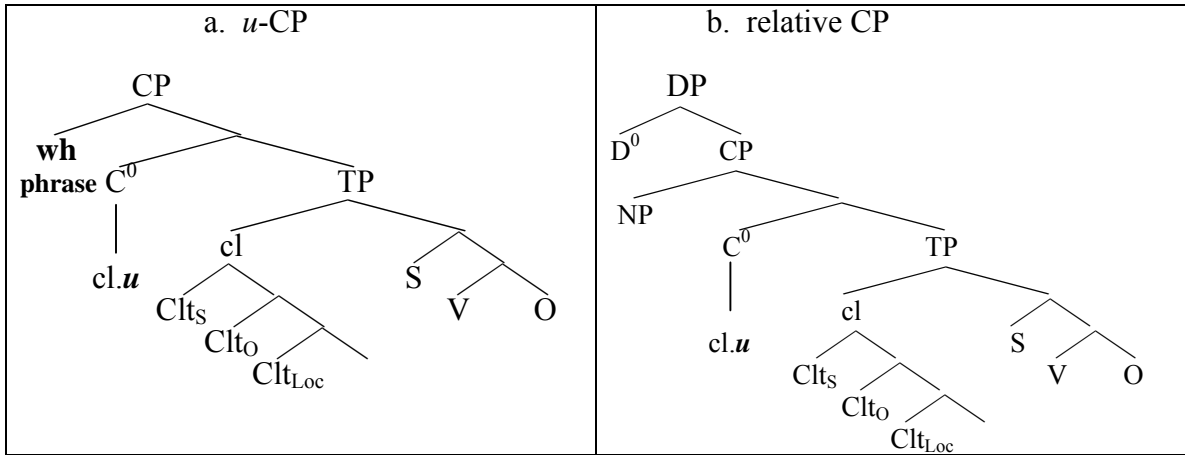
- (10) a. **k.u** ngeen-leen-fa togg-al? *u*-construction
 cl.u 2pl-3pl-loc cook-ben
 “who did y’all cook them for there?”
 b. gis-na-a **nit** **k.u** ngeen-leen-fa togg-al relative clause
 see-na-1sg person cl.u 2pl-3pl-loc cook-ben
 “I saw a person who y’all cooked them for there”

Note from comparing (10)a and (10)b that the *u*-forms are used in the formation of relative clauses whose heads are interpreted as indefinite. The linear order of elements in the *u*-CP and in a relative CP can be schematized as:

- (11) a. cl.u clt_{subj}-clt_{obj}-clt_{loc} SDP V O *u*-construction
 b. NP cl.u clt_{subj}-clt_{obj}-clt_{loc} SDP V O relative clause

These can be represented in tree form as:

(12) TP Types for *u*-construction and Indefinite Relative Clauses



In both constructions, *-u-* is preceded by a class marker, and immediately followed by the clitic string (Subject, Object, then Locative). The clitic string is followed by the DP subject, verb, and object (where appropriate). The only difference between the relative clause and the *u*-construction is that the relative clause is marked by the presence of an overt NP that precedes a *-u-* and determines the class agreement that appears on it.

There are no *u*-forms that correspond to “why” or “how many”. As noted in Chapter 1, there is no single word that corresponds to “why” in Wolof. Similarly, *ñaaata* ‘how many’, probably is necessarily phrasal.¹

2.2 Category of the *u*-form

2.2.1 *Non-DP-like distribution of the u-form*

There are a number of differences between the *u*-forms and the *an*-forms. It will be seen that overall, the *u*-forms have the distribution of clitics (Kayne 1975), unlike the *an*-forms, which are full DPs. The *an*-forms and other uncontroversial phrasal DPs cluster together, while the *u*-forms do not.

¹ For some speakers, the *u*-construction can be used to ask ‘when’. In that case, the *b*-class is used *b-u...*

The first difference between the *u*-forms and the *an*-forms is that the *an*-forms can stand by themselves, the *u*-forms cannot:

- (13) a. k-enn ñëw-na
 class-one arrive-*na*
 “someone arrived”
- b. k-an ? c. *k.u d. Isaa
 cl-an cl.u
 “who?” “who?”

The inability to occur without a host is one of the defining properties of clitics (Kayne 1975). I will take (13)c to show that *cl.u*, the *u*-form, is a clitic, while (13)b shows that the *an*-form is not a clitic. Instead, it distributes like a lexical DP ((13)d). However, it is not immediately clear what the ungrammaticality actually results from. There are three possibilities. It could be that in (13)c, the appropriate phonological host for *cl.u*, a TP, is missing to its right. That is, the ungrammaticality of (13)c results from the lack of a phonological host which *cl.u* can lean on. It may also be that the type of TP that *-u-* occurs with simply cannot be elided. Or, the inability to use the *u*-forms alone may result from a combination of the two other factors. That is, the TP can be elided, but *cl.u* needs an appropriate host.

A second, crucial difference between the *u*-forms and the *an*-forms concerns where they occur in a clause. Simply put, *u*-forms always precede TP. They are never inside of TP or in situ.

One factor in the in-situability of wh items is the clause type. Consider neutral (i.e. no focus or negation) *na*-clauses. These can contain an *an*-form and yield an echo question, but not an *u*-form:

- (14) a. xale yi togg-al-na-ñu Isaa **ceebujën** lexical DP
 child the.pl cook-ben-*na*-3pl isaa rice.fish
 “the children cooked Isaa fishrice”

b. xale yi togg-al-na-ñu Isaa l.an child the cook-ben-na-3pl isaa cl.an “the kids cooked what for Isaa?”	<i>an</i> -form echo only
c. *xale yi togg-al-na-ñu Isaa l.u child the cook-ben-na-3pl isaa l.u “the kids cooked what for Isaa?”	<i>u</i> -form
d. *xale yi togg-al-na-ñu- l.u Isaa child the.pl cook-ben-na-3pl-cl.u isaa “the children cooked what for Isaa?”	<i>u</i> -form

While the presence of the *an*-form in (14)b yields an echo question, an *u*-form in a *na*-clause simply cannot be said at all ((14)d). This is true even if the *u*-form is in the clitic position, as in (14)d.² Importantly, *na*-clauses do allow a *wh* in the left periphery, but only an *an*-form:

(15) a. l-an xale yi togg-al-na-nu-*(ko) Isaa cl-an child the cook-ben-na-3pl-3sg isaa “what, the children cooked it for Isaa?”	<i>an</i> -form echo only
b. * l-u xale yi togg-al-na-nu-(ko) Isaa cl.u child the cook-ben-na-3pl-3sg isaa “what, the children cooked it for Isaa?”	<i>u</i> -form

As with the examples in (14), while the *an*-form yields an echo interpretation, the *u*-form is impossible. In other words, the element *na* is in complementary distribution with *u*-forms, but it does occur with *an*-forms and lexical DPs (14)a. In Chapter 1, it was argued that markers like *na* are analyzed as C⁰'s (cf. Dunigan 1994, Torrence (2000)). Given this, the generalization is that *u*-forms are in complementary distribution with certain complementizers. With an expanded C-domain, it is often difficult to predict which elements can co-occur in the higher clausal regions. However, it is unexpected that a DP would have co-occurrence restrictions with a complementizer. Instead, this complementary distribution seems analogous to the type of co-occurrence restriction

² The *u*-forms can also be used to ask echo questions. They appear in the left periphery.

found in English between complementizers like *that* and *for*. Otherwise, the fact that an *an*-form is permitted in the left periphery, of a *na* clause, while an *u*-form is not is mysterious.

This becomes especially clear if we examine a bit more the *na* neutral clauses, which in the simple case, do not allow for non-echo *wh* questions. I noted that a *wh* can appear in the left periphery of a *na* clause, resumed by a clitic:

- (16) **l.an** xale yi lekk-na-ñu-*(**ko**)
 what child the.pl eat-*na*-3pl-3sg
 “the children ate what?” (echo)

When the adverbial *-agum* 'already' is present in a *na* clause, non-echo *wh* questions are allowed:

- (17) a. xale yi lekk-na-ñu **l.an** *an*-form
 child the.pl eat-*na*-3pl what
 “the children ate what?” Echo only
- b. xale yi lekk-**agum**-na-ñu **l.an** *an*-form
 child the.pl eat-already-*na*-3pl what
 “what have the children already eaten?”
- c. xale yi lekk-**agum**-na-ñu **ceebujën** bi lexical DP
 child the.pl eat-already-*na*-3pl rice.fish the
 “have the children already eaten the fishrice?”

However, even in such an accommodating situation, an *u*-form is impossible in a *na* clause:

- (18) a. ***l.u** xale yi lekk-**agum**-na-ñu-(**ko**) left periphery
 cl.u child the.pl eat-already-*na*-3pl-3sg
 “what have the children already eaten?”
- b. *xale yi lekk-**agum**-na-ñu-**l.u** clitic position
 child the.pl eat-already-*na*-3pl-cl.u
 “what have the children already eaten?”
- c. **l.u** xale yi lekk-**agum** *u*-contruction
 cl.u child the.pl eat-already
 “what have the children already eaten?”

(18)c shows that an *u*-form can occur with *agum* ‘already’, so long as there is no *na*-.

Another distinguishing property is that the *an*-forms can be clefted, the *u*-forms cannot be:

- (19) a. **k.an** l-a xale yi dóór *an*-form
 cl-*an* xpl-*a* child the.pl hit
 “who is it that the children hit?”
- b. **Isaa** l-a xale yi dóór non-wh DP
 isaa xpl-*a* child the hit
 “it’s Isaa that the children hit”
- c. ***k.u** l-a-ñu dóór *u*-Form
 class-*u* xpl-*a*-3pl hit
 “who did the children hit?”

As before, the *an*-form patterns with lexical DPs. These contrast with the *u*-forms, which cannot occur in the cleft. The *u*-forms cannot occur in clefts even when the wh is not clefted item in a cleft CP:

- (20) a. démb l-a xale yi dóór **Isaa** non-wh DP
 yesterday xpl-*a* child the.pl hit isaa
 “it’s yesterday that the children hit Isaa”
- b. démb l-a xale yi dóór **k.an** *an*-form
 yesterday xpl-*a* child the.pl hit cl.*an*
 “it’s yesterday that the children hit who?”
- c. *démb l-a xale yi dóór **k.u** *u*-form
 yesterday xpl-*a* child the.pl hit cl.*u*
 “it’s yesterday that the children hit who?”
- d. *démb l-a-**k.u** xale yi dóór *u*-form
 yesterday xpl-*a*-cl.*u* child the.pl hit
 “it’s yesterday that the children hit who?”

It cannot be the solely the fact that *u*-forms are clitics which is responsible for the ungrammaticality of (19)c. This is because, as (20)d shows, even when the *u*-form is in the clitic position, it still yields ungrammaticality. (20)b shows that a wh-word need not be in the cleft position. The incompatibility seems to be related to the clause type. In this

case, the cleft CP, marked by the presence of the C⁰ *-a-*, is in complementary distribution with the *u*-form.

The an-forms and non-wh DPs can be coordinated with the DP coordinator, *ak*,
u-forms cannot:

- (21) a. **Isaa ak woto bi** l-a xale yi dàq non-wh DP
 isaa and car the xpl-*a* child the chase
 “it’s Isaa and the car that the children chased”
- b. **k.an ak l.an** l-a xale yi dàq? *an*-form
 cl.an and cl.an xpl-*a* child the chase
 “who and what is it that the children chased?”
- c. ***k.u ak l.u** xale yi dàq *an*-form
 cl.u and cl.u child the chase
 “who and what did the children chase?”

The *u*-forms cannot be coordinated with the clausal coordinator *te* either:

- (22) ***k.u te l.u** xale yi dàq *u*-form
 cl.u and cl.u child the chase
 “who and what did the children chase?”

The inability to be coordinated is a canonical property of clitics (Kayne 1976).

Only one *u*-form per clause is allowed, while multiple an-forms may occur:

- (23) a. ***k.u l.u** jox-oon xale yi³ *cl.u...cl.u*
 cl.u cl.u give-past child the
 (intended: “who gave what to the children?”)
- b. **k.an l.an** l-a jox-oon xale yi *cl.an...cl.an*
 cl.an cl.an xpl-*a* give-past child the
 “as for who, what is it that he gave to the children?”
 echo only
- c. **jigéen ñi tééré bi** l-a-ñu jox-oon xale yi *DP...DP*
 woman the book the xpl-*a*-3pl give-past child the
 “as for the women, it’s the book that they gave to the children”

The impossibility of multiple (23)a is unlike the behavior of “special” clitics in Romance and other languages, of which multiple occurrences can be found in a single clause.

³ Reversing the order of the *u*-forms does not change the ungrammaticality of (23)a.

Indeed, it is unlike the behavior of special clitics in Wolof. While the *an*-forms in (23)b give rise to an echo question, (23)a, with two *u*-forms is unsayable. Thus, there is one dedicated position per clause where *u*-forms occur.

The data in this section are summarized in the table below:

(24) Properties of *u*-forms and *an*-forms

	<i>u</i> -form	<i>an</i> -form	lexical DP
stand alone	*	✓	✓
coordination	*	✓	✓
in situ	*	✓	✓
clefting	*	✓	✓
multiple times	*	✓	✓

The table shows that *u*-forms do not have the distribution of lexical DPs or the *an*-forms. This is, *prima facie*, a strong reason to conclude that the *u*-forms are not DPs. This is reinforced by the fact that even though the *u*-forms have clitic properties, they do not have the distribution of special clitics in Wolof either, of which there may be multiple occurrences, for example.

2.3 Categorical Status of the *u*-form

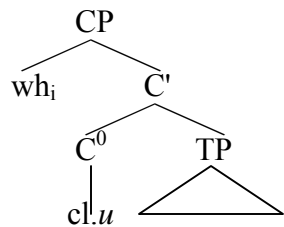
I showed in the previous section that there is a distributional split between the *u*-forms and the *an*-forms. The *an*-forms and lexical DPs pattern together, while the *u*-forms have the properties of a clitic. However, this does not tell us what the syntactic category of the *u*-forms is. In this section, I focus on the status of the *u*-forms. There are two plausible options that I will address here:

- (25) a. The *u*-forms are (clitic) wh-words
 b. The *u*-forms are (clitic) complementizers

The first option, that the *u*-forms are wh-words, is plausible because the *u*-forms occur in wh-questions (and relative clauses). The second option is reasonable because the *u*-forms occur on the left edge of CP, where complementizers canonically occur in the language.

I will argue for the second option, that the *u*-forms are agreeing complementizers. The complementizer analysis can be represented as:

(26) Complementizer Analysis



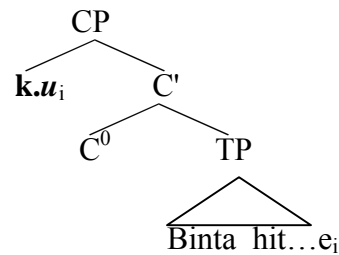
In the tree above, the *-u-* is a C^0 that takes a relative TP complement. A silent *wh*-word, wh_i , occupies SpecCP. This *wh*-word triggers agreement on C^0 . This section will show that various *wh*-word analyses do not work for Wolof, and that the C^0 analysis straightforwardly explains the observed properties of the *u*-construction. The overt *wh*-word analysis says that the *u*-forms are *wh*-words that occur in SpecCP. Wolof is not unique in having agreeing complementizers. In fact, agreeing C^0 are attested in French (*que/qui* alternation (Kayne 1976), Flemish (Haegemen 1992, De Vogelaer, Neuckermans, and Wyngaerd 2002), Kinande (a Bantu language; see Schneider-Zioga 1995), and Irish (McCloskey 2001, 2002), Egyptian Arabic (Buell p.c.)

The *wh*-word analysis has three variants: simple clitic, scope marking, and copy analyses. I discuss each in turn.

In the simple clitic analysis, a question like (27)a, will be represented as in (27)b:

- (27) a. **k.u** Bintë dóór
 cl.u binta hit
 “who did Binta hit?”

b. Wh-word Analysis



In (27)b, *k.u* is the wh-word in SpecCP, where C^0 is silent. Further, *k.u* is related to a silent category inside of TP, e_i . The wh-word is essentially like an English wh-word and occurs in SpecCP. It is an accidental property that the *u*-form is a clitic. As such, it must associate with a particular host, the silent complementizer, C^0 . This analysis can explain several of the properties of the *u*-forms. That the *u*-forms cannot be clefted, stand alone, or undergo coordination follows from their clitic property. That the *u*-forms do not occur in situ could result from their being wh-words which cannot be in situ (i.e. they must raise to SpecCP overtly, not covertly) or it could follow from the clitic status. That is, as clitics, they are “picky” about their host. When an *u*-form is in situ, it simply cannot associate with the proper host, C^0 . The ban on multiple occurrences of *u*-forms would fall out if the silent C^0 does not project multiple specifiers.

However, the *u*-forms are unlike canonical clitics in the language, multiple occurrences of which are possible. Under this analysis, it is not clear under this analysis why the *u*-forms could not occur in what are canonical clitic positions in non-relative clause types, like *na*-clauses (clitic string underlined):

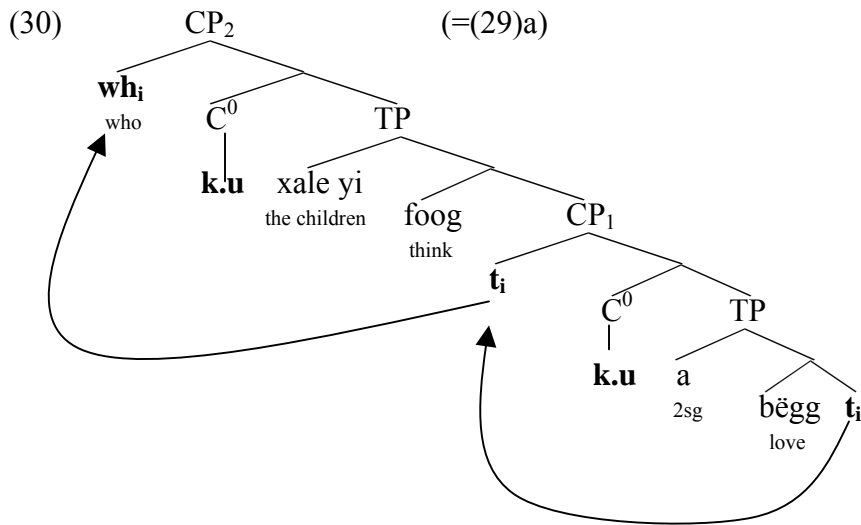
- (28) a. *xale yi jox-na-ñu-l.u-fa Isaa *na*-clause
 child the.pl give-*na*-3pl-cl.*u*-loc isaa
 (intended: “what did the children give to Isaa there?”)
- b. *xale yi jox-na-ñu-fa-l.u Isaa *na*-clause
 child the.pl give-*na*-3pl-loc-cl.*u* isaa
 (intended: “what did the children give to Isaa there?”)

c. xale yi jox-na-ñu-ko-fa Isaa *na*-clause
 child the.pl give-*na*-3pl-3sg-loc isaa
 “the children gave it to Isaa there”

According to the wh-word analysis, the *u*-form is a wh-word and it moves to SpecCP. This is not surprising because the *u*-form simply displays a well-known feature of wh-words cross-linguistically. The principal expectation of the wh-word analysis is that the *u*-forms have the distribution of wh-words. In this light, recall from the introduction that the *u*-forms occur in *u*-chains:

- (29) a. [_{CP} **k.u** xale yi foog [_{CP} **k.u** a bëgg]] ?
 cl.*u* child the.pl think cl.*u* 2sg love
 “who do the children think that you love?”
- b. [_{CP} **f.u** mu wax [_{CP} **f.u** Móódu gis-e-woon Dudu démb]] ?
 cl.*u* 3sg say cl.*u* moodu see-loc-past dudu yesterday
 “where did he say that Moodu saw Dudu yesterday?”
- c. [_{CP} **f.u** a defe [_{CP} **f.u** Maryam wax [_{CP} **f.u** ñu y teg tééré yi]]]
 cl.*u* 2sg think cl.*u* maryam say cl.*u* 3pl imp put book the.pl
 “where do you think Maryam said they will put the books?”

An *u*-chain consists of iterated *u*-forms across CPs. In (29)a, the *k.u*'s in the matrix and embedded CP form an *u*-chain. The examples in (29)b and c show that *u*-chains can be formed from various noun classes and that *u*-chain formation is unbounded. If the *u*-forms are wh-words as in English, the existence of *u*-chains is quite mysterious since the questions in (29)a-c are interpreted as single wh-questions. From this, I conclude that the *u*-forms are not simple wh-words akin to those found in English wh-questions. Under the complementizer analysis, the existence of *u*-chains is not mysterious, it is expected. Consider how a case like (29)a would be derived:



The iteration of the *u*-forms (i.e. the existence of *u*-chains) falls out from successive cyclic movement of the silent *wh*-word through the intermediate SpecCPs. The *wh*-word is in a spec-head relation with *-u-* and triggers agreement on the C^0 s, spelled out as the class marker. (This means that there are silent *wh*'s associated with different noun classes.)

Although the *u*-forms are not canonical *wh*-words, if we look across languages there are various constructions that involve *wh*-words. One of these, the “scope marking” a.k.a “partial movement” construction, is found in a number of languages:

- (31) a. **was** glaubst du [_{CP} **wen** Maria liebt] German
 what think.2sg you who.acc maria love.3sg
 “who do you think that Maria loves?”
- b. Siitaa-ne **kyaa** socaa [_{CP} ki Ravii-ne **kis-ko** dekhaa] Hindi
 sita-erg what thought that ravi-erg who saw (Mahajan 2000)
 “who did Sita think that Ravi saw?”
- c. **so** misline [_{CP} **savo filmi** o Demiri dikhla] Romani
 what you.think which film o demir saw (McDaniel 1989)
 “which film do you think Demir saw?”
- d. **shi**-tsawwarit Mona [_{CP} Ali raah **ween**] Iraqi Arabic
 what-think.3sg.fem mona ali went where (Wahba 1991)
 “where did Mona think that Ali went?”

e. **k'ah** čhu Mohanas bāsān [_{CP} (ki) **kamis** nish chi Mirā bihit] Kashmiri
 what aux mohanās believe that whom near mira sit (Wali 1988)
 “who does Mohan believe Mira is sitting near?”

f. **keq** itom [_{CP} **wen-il** nimiy-ac-il] Passamaquoddy
 what say who-obv IC.see-3Cong-PartObv (Bruening 2004)
 “who did he say he saw?”

g. **jak** myślisz [_{CP} **kogo** Janek lubi] Polish
 how think.you whom john loves (Stepanov 2000)
 “who do you think John loves?”

All of the questions in (31) are interpreted as single wh-questions, in spite of the fact that they contain two wh-words. In the scope marking constructions in (31), a wh-word, typically *what*, appears in the matrix clause. The embedded clause contains the “real” wh-word. The dummy wh-word occurs in the matrix clause, where the “real” wh is interpreted. In (31)a, the wh-word *was* “what”, occurs in the matrix SpecCP, while *wen*, the wh-word, appears in the embedded SpecCP. (31)a is informally interpreted as asking a question about *who*, not *what*. There are two main ideas concerning the status of the wh-word that appears in the matrix CP. The Direct Dependency approach (McDaniel 1989, Beck and Berman 2000) says that wh-words like *was* and *k'ah* in (31)a and (31)e are expletives that serve to mark the scope of the real wh-word. At Logical Form (LF) the wh-word raises so that it can be interpreted, with concomitant deletion of the expletives. In the Indirect Dependency approach (Dayal 1994, 1996, 2000, Horvath 1997), the higher wh is a real wh-word that ranges over *propositions*. Under the Direct Dependency approach, the LF of a partial movement construction looks like a canonical wh-question with fronting. Informally, under the Indirect Dependency approach, a question like (31)a asks for the set of propositions that form the answer to the question “who does Maria love?”, such that you think those propositions are true. Thus, the embedded clause serves as the restriction on the matrix wh-word, just as the NP *book* restricts the range of the wh quantifier in *which book*.

Initial considerations suggest that neither the Direct nor Indirect Dependency approaches is suitable for Wolof. Consider the *u*-chain:

- (32) [CP **k.u**₂ xale bi foog [CP **k.u**₁ Bintë dóór]]
 cl.*u* child the think cl.*u* binta hit
 “who does the child think that Binta hit?”

Under a Direct Dependency analysis of the *u*-forms, in (32) the embedded *k.u*₁ is the real wh-word, while the higher *u*-form, *k.u*₂, marks the scope of the wh-question. However, unlike the scope marking constructions in (31), *u*-chains do not seem to involve an expletive “wh” in the matrix clause and a “real” wh in the embedded clause:

- (33) a. **l.u** Bintë jënd
 cl.*u* binta buy
 “what did Binta buy?”
- b. *[CP **l.u** xale bi foog [CP **k.u** Bintë dóór]]
 cl.*u* child the think cl.*u* binta hit
 “what does the child think who did Binta hit?”
- c. **n.u** ñu def⁴
 cl.*u* 3pl do
 “what did they do?”
- d. *[CP **n.u** a foog [CP **l.u** ñu def]
 cl.*u* 2sg think cl.*u* 3pl do
 “what do you think they did?”

Since there are *u*-forms (and *u*-chains) for all of the noun classes, it would be misleading to characterize them as expletives. Note that *k.u* is not an expletive either. It asks for a

⁴ The “manner” *ni*-class elements can also be used to mean “what”, but it does not refer to objects:

- (i) ***n.u** ñu togg
 cl.*u* 3pl cook
 “what did they cook?”

It refers to situations, as in (33)c or is used with verbs like, *wax* “say”:

- (ii) **n.u** mu wax-(*e)
 cl.*u* 3sg say-mann
 “what did he say?”

Note that when *ni*-class elements are used to mean “what”, they do not trigger the *-e* suffix when extracted:

- (iii) **n.u** ñu ko def-*(e)
 cl.*u* 3pl 3sg do-mann
 “how did they do it?”

human referent, for example. From a morphological perspective, at least, this makes the Direct Dependency approach seem suspicious. Under a Direct Dependency analysis then, the peculiarity of Wolof would then be that an identity requirement is enforced between the embedded *wh*-word and the expletive *wh* in the matrix. Alternatively, it could be said that the expletive *wh* agrees with the embedded *wh*, a long(er) distance version of *there seem to be three men in the garden/there seems to be a man in the garden*.

In support of the Indirect Dependency approach, it has been noted that the *wh*-word in the matrix clause is often the one used in questioning propositions, as in Passamaquody:

- (34) a. **keq** itom [CP wen-il nemiy-ac-il] (adapted from Bruening 2004, 17b)
 what say who-obviative see-3conjunct-participle
 “who did he say he saw?”
- b. **keq** Mihku ikonewato-k (adapted from Bruening 2004, 28b)
 what mihku deny-3conjunct
 “what did Mihku deny?”

In Wolof, not unexpectedly, words like *who* cannot be used to question propositions.

Neither of the approaches fares well when we look at “mixed” *u*-chains:

- (35) a. [CP **kan** l-a xale bi gëm [CP **k.u** Bintë gis]]
 who xpl-*a* child the believe cl.*u* binta see
 “who is it that the child believes that Binta saw?”
- b. [CP **b.an** **tééré** l-a xale bi foog [CP **b.u** Bintë sàcc]]
 cl.which book xpl-*a* child the think cl.*u* binta steal
 “which book is it that the child think that Binta stole?”
- c. [CP **nan** l-a-ñu wax [CP **n.u** jigéen ji defe [CP **n.u** Bintë ubbe-e bunt bi]]]
 how xpl-*a*-3pl say cl.*u* woman the think cl.*u* binta open-mann door the
 “how is it that they said that the woman thinks that Binta opened the door?”

Mixed *u*-chains are composed of an *an*-form in the matrix clause and *u*-forms in embedded clauses. For the Direct Dependency approach, what is important to notice first

in the mixed *u*-chains in (35)a-b is that the putative scope markers, *k.u* and *n.u*, simply do not mark the scope of the *wh*-word. Given that (35)a-c are interpreted as single matrix *wh*-questions, this is *prima facie* evidence that the *u*-forms are not scope marking *wh*-words. In addition, phrases like *ban tééré* 'which book' and *k.an* 'who' are not plausibly expletives. For Indirect Dependency, a similar problem arises in that *wh*-phrases like *ban tééré* 'which book' and *k.an* 'who' straightforwardly range over sets of books and people, not propositions.

For both approaches, the *wh*-words are in the opposite order from that seen in partial movement constructions. In partial movement constructions, the expletive/scope marking *wh*-word must c-command the real *wh*-word:

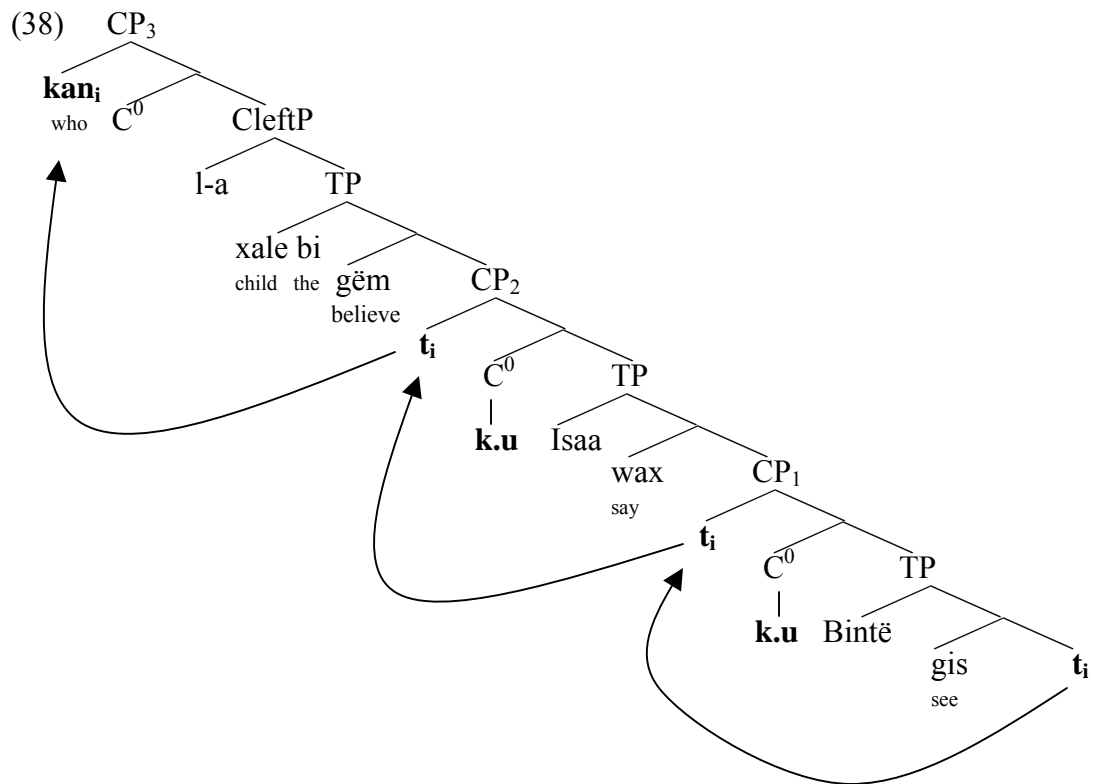
- (36) ***wen** glaubst du [CP **was** die Maria gesehen hat]
 who.acc believe you what the maria seen has
 intended, "who do you believe that Maria saw?"

The ungrammatical (36) has the *wh*-words in the "Wolof" order (e.g. (35)a). Thus, I conclude that the *u*-construction is not a partial movement/scope marking construction.

Under a C^0 analysis, the existence of mixed *u*-chains is expected. Consider the mixed *u*-chain:

- (37) a. [CP **kan** l-a xale bi gëm [CP **k.u** Isaa wax [CP **k.u** Bintë gis]]]
 who xpl-a child the believe cl.u isaa say cl.u binta see
 "who is it that the child believes that Isaa said that Binta saw?"

This is analyzed as:



In (38) the *an*-form is merged as the object of *gis* 'see' in the embedded clause. It raises to SpecCP₁, where it triggers agreement on the complementizer *-u-*. This agreement is spelled out as the class consonant that precedes *-u-*, *k-*. It raises through SpecCP₂, where it again triggers agreement on *-u-*. Finally, the *an*-form raises to the focus position of the matrix clause, the head of which is silent.⁵ Just as with the simple *u*-chains, mixed *u*-chains arise as a consequence of successive cyclic wh-movement.

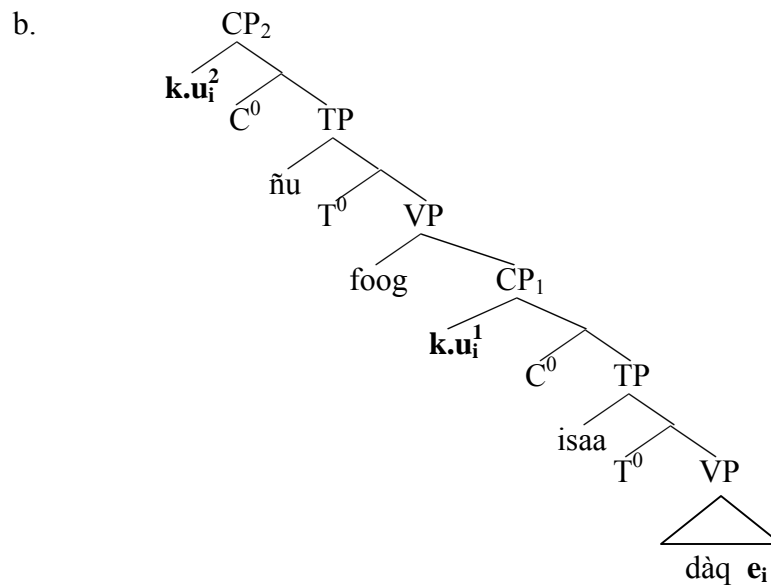
There is a third alternative, the wh-copy construction, which is superficially similar to the *u*-construction. Wh-copy constructions have been reported for various Indo-European languages:

⁵ I analyze *-a-* as a complementizer. *kan* does not trigger agreement because the SpecCP headed by *-a-* is occupied by an expletive, *l-*. See Chapter 6 *Clefts*.

- (39) a. [_{CP} **wer** glaubst du, [_{CP} **wer** recht hat]] German
 who.nom think you who.nom right has (Höhle 2000)
 “who do you is right?”
 (more lit. “who do you think, who is right?”)
- b. [_{CP} **wêr** tinke jo [_{CP} **wêr**'t Jan wennet]] Frisian
 where think you where'that jan resides (Hiemstra 1986)
 “where do you think Jan resides?”
- c. [_{CP} **waarvoor** dink julle [_{CP} **waarvoor** werk ons]] Afrikaans
 where.for think you where.for work we (du Plessis 1977)
 “what do you think we are working for?”
- d. [_{CP} **kas** misline [_{CP} **kas** o Demiri dikhlâ]] Romani⁶
 who you.think who the demiri saw
 “who do you think Demir saw?”

Under a wh-copy analysis, the *u*-construction contains wh-words like those in the wh-copy constructions in (39):⁷

- (40) a. **k.u** ñu foog **k.u** Isaa dàq?
 cl.*u* 3pl think cl.*u* isaa chase
 “who do they think that Isaa chased?”



⁶ From McDaniel 1986, cited in Höhle 2000.

⁷ Prima facie, mixed *u*-chains (*cl.an...cl.u*) do not fall under the purview of this analysis because the wh-words in the *an*-form is not copied.

In the tree above, there are two distinct wh-words, $k.u_i^1$ and $k.u_i^2$, which are linked (presumably via a coindexation mechanism). However, under a wh-copy analysis, there is no principled reason why

- (41) *_{[CP k.an l-a-ñu defe [CP k.an l-a Isaa dàq]]} **cl.an...cl.an*
cl.an xpl-a-3pl think cl.an xpl-a isaa chase
 “who do they think that Isaa chased?”

is ungrammatical. After all, the *an*-forms are indeed wh-words. Here it may be noted that the wh-copy construction in German does not (always) allow for phrasal wh-expressions, i.e. those that contain more than one “morphophonological word” (Fanselow and Mahajan 2000). Note the contrast in the following:

- (42) a. ***welche (bücher)** du glaubst **welche bücher** hat sie gekauft⁸
which.acc books.acc you think which.acc books.acc has she bought
 “which books do you think she bought?”
- b. **wo-von** glaubst du **wo-von** sie träumt?
what-of think you what-of she dreams
 “what do you think she dreams of?”

In (42)a, where there is a full phrasal wh-DP, copying is not possible. This is different from (42)b, which contains some type of morphologically incorporated wh-word and *von* ‘of, from’, which is otherwise a preposition.

Wh-copy constructions has not been studied extensively relative to canonical wh-constructions. There is quite a bit of disagreement about the basic properties of this construction in German (Fanselow 2004, Felser 2004, Pafel 2000, Reis 2000, Rett 2004). In addition, there appears to be significant speaker and dialectal variation in the properties of the construction and no agreement as to which German (sub)dialects, if any in particular, the construction occurs in. Here, I compare some of the properties of the

⁸ Adapted from Höhle 2000.

German wh-copy construction noted in the literature to the Wolof *u*-chains, with the understanding that the German constructions do not represent a unified phenomenon across (dialects or) speakers.

Clausal pied piping is impossible in the wh-copy construction:

- (43) *_{[CP wer ist gegangen] wer glaubst du?}⁹
 who.nom is left who.nom think you

However, *u*-chains can be formed under clausal pied piping:

- (44) a. _{[CP k.u xale bi foog [CP k.u dem]]} *u*-chain
 cl.*u* child the think cl.*u* leave
 “who does the child think left?”
- b. _{[CP k.u dem]_i [CP k.u xale bi foog t_i]} *u*-chain + clausal pied piping
 cl.*u* leave cl.*u* child the think
 “who left does the child think?”

The wh-copy construction does not occur with matrix negation:¹⁰

- (45) ***Wen** glaubst du **nicht, wen** sie liebt ?
 who.acc think you not who.acc she loves (Reis 2000, #106a)
 “who don’t you think she loves?”

An *u*-chain can tolerate negation in the matrix, with a list or strongly D-linked scenario:

- (46) ?_{[CP k.u Bintë wax-ul [CP k.u Isaa gise-el]]}
 cl.*u* binta say-neg cl.*u* isaa see-appl
 “who didn’t Binta say that Isaa met with?”
 (“which person has the property that Binta did
 not say that Isaa met with that person?”)

In addition, *u*-chains can span “negative” predicates in Wolof:

- (47) a. am-na-a xel-ñaar ne d-u togg ceebujën
 have-*na*-1sg mind-two that *di*-neg cook rice.fish
 “I doubt that he’ll cook fishrice”

⁹ This is only good with a noticeable pause after the “embedded” CP, yielding an appositive reading.

¹⁰ The partial movement construction does not occur with matrix negation either.

b.**k.u** a am xel-ñaar (*ne) **k.u** d-ul togg ceebujën
 cl.u 2sg have mind-two that cl.u *di*-neg cook rice.fish
 “who do you doubt will cook fishrice?”

Factive predicates do not occur with the wh-copy construction (nor with partial wh-movement):

(48) ***Wen** fand er gut, **wen** Hans eingeladen hatte
 what.acc found he good who.acc hans invited had

An *u*-chain can occur across a factive predicate:

(49) **l.u** Bintë **fätte** **l.u** ma togg
 cl.u binta forget cl.u 1sg cook
 “what did Binta forget that I cooked?”

For many speakers, the wh-copy construction cannot tolerate multiple wh's:

(50) *[_{CP} **Wen** hat Peter **wann** gesagt, [_{CP} **wen** er besuchen wird]]?
 who.acc has peter when said who.acc he visit will

An *u*-chain can occur in a multiple wh-question, with the *an*-wh phrase in-situ:

(51) a. [_{CP} **y.o** o foog [_{CP} **y.u** kan wax [_{CP} **y.u** Isaa di togg]]]¹¹
 cl.u 2sg think cl.u who say cl.u isaa imperf cook
 “what(pl) do you think that who said that Isaa will cook?”

b. [_{CP} **y.o** o foog [_{CP} **y.u** Bintë wax kan [_{CP} **y.u** Isaa di togg]]]
 cl.u 2sg think cl.u binta say who cl.u isaa imperf cook
 “what(pl) do you think that Binta told who that Isaa will cook?”

In sum, *u*-chains in Wolof are not partial movement or wh-copy constructions. This was shown by pointing out several differences between *u*-chains and the partial movement and copy constructions. On the other hand, the complementizer analysis was shown to be able to account for the properties of *u*-chains.

To summarize, in this section, I have argued that the *u*-forms are not wh-words, but agreeing complementizers. This was based on such phenomena as the existence of *u*-chains, i.e. multiple occurrences of the *u*-forms. I also argued that the *u*-construction is

¹¹ I have been unable to detect Superiority effects in Wolof.

not an instance of either partial movement or a *wh*-copy construction. This is because the *u*-construction simply does not have the properties of either of these constructions.

2.4 Agreement

If indeed the *u*-forms are agreeing complementizers, the question arises as to what they are agreeing with in the *u*-construction:

- (52) **l.u** Isaa sàcc?
 cl.*u* isaa steal
 “what did Isaa steal?”

The analysis in the last section involved the positing of a silent *wh*-word. This was necessary given the conclusion that the *u*-forms are not *wh*-words. Here, I build on this argumentation and look at affirmative evidence for the presence of silent *wh*-words. To see this, it is necessary to first look at how agreement works in relative clauses in Wolof. It was noted in the first chapter that Wolof is a noun class language with pervasive concord on nominal dependents. Recall that the *u*-forms occur with relative TPs:

- (53) a. **j.u** [_{TP} ñu-ko-fa jënd-ël-óón démb] *u*-construction
 cl.*u* 3pl-3sg-loc buy-ben-past yesterday
 “what (*ji*-class item) did they buy there for him yesterday?”
- b. yàmbaa **j.u** [_{TP} ñu-ko-fa jënd-ël-óón démb] relative clause
 marijuana cl.*u* 3pl-3sg-loc buy-ben-past yesterday
 “some marijuana that they bought there for him yesterday”

The cases in (53) are represented templatically as:

- (54) a. cl.*u* [_{TP} [_{ClTP} clt_{subj}-clt_{obj}-clt_{loc}] S_{DP} V O] *u*-construction
 b. NP cl.*u* [_{TP} [_{ClTP} clt_{subj}-clt_{obj}-clt_{loc}] S_{DP} V O] relative clause

Before looking at the *u*-construction, consider the agreement configuration in a headed relative clause:

- (55) a. *yoxo y.u* [nit **k.i**] *bale-e* [kër **g.i**] agreement to left
 pl.hand cl.u person cl.def sweep-instr house cl.def
 “some hands that the person swept the house with”
- b. **yoxo k.u* [nit **k.i**] *bale-e* [kër **g.i**] agreement to right
 pl.hand cl.u person cl.def sweep-instr house cl.def
- c. **yoxo g.u* [nit **k.i**] *bale-e* [kër **g.i**] agreement to right
 pl.hand cl.u person cl.def sweep-instr house cl.def
- d. **yoxo Ø.u* [nit **k.i**] *bale-e* [kër **g.i**] no agreement
 pl.hand .u person cl.def sweep-instr house cl.def

In (55)a, the grammatical relative clause, the agreement that precedes the complementizer *-u-* is *y-*, which agrees with the plural noun *yoxo* “hands”. There are no other plural nouns in the clause. The other nouns, *nit* and *kër*, are in the singular *ki-* and *gi-* noun classes, which can be seen from the concords on the definite articles. The examples in (55)b and c show that *-u-* cannot agree with a nominal to its right. Finally, (55)d shows that *-u-* cannot fail to agree. These agreement configurations can be graphically represented as:

- (56) a. *yoxo y.u* nit **k.i** *bale-e* kër **g.i** agreement in (55)a
 b. **yoxo k.u* nit **k.i** *bale-e* kër **g.i** agreement in (55)b
 c. **yoxo g.u* nit **k.i** *bale-e* kër **g.i** agreement in (55)c
 d. **yoxo u* nit **k.i** *bale-e* kër **g.i** no agreement in (55)d

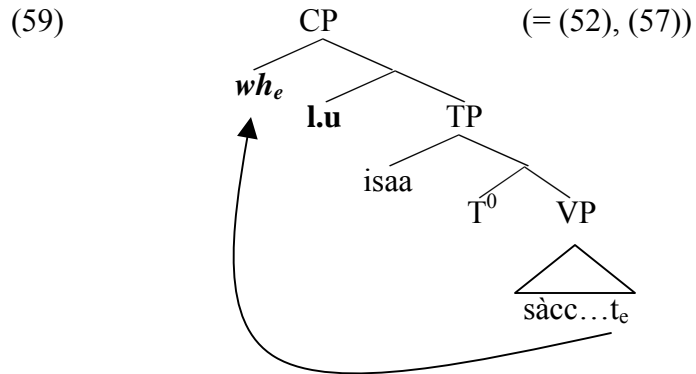
The descriptive generalization is that: *-u-* must agree with a trigger to its left. Going back to the *u-* construction, nothing overt precedes the *-u-*:

- (57) **l.u** *Isaa sàcc?* (=52)
 cl.u isaa steal
 “what did Isaa steal?”

In addition, as in relative clauses, *-u-* cannot fail to display agreement:

- (58) * **u** *Isaa sàcc*
u isaa steal

Given these agreement facts, I conclude that the *u*-construction must involve the presence of a silent (*wh*) nominal, *wh_e*, that triggers the agreement on *-u-*. The (silent) *wh* is merged within TP and undergoes regular A'-movement to SpecCP:



As noted in earlier, there are *u*-forms for all of the noun classes. Given the present analysis, it means that Wolof has silent *wh*-words for each noun class.

The positing of a silent *wh*-word in the *u*-construction is supported by the fact that some dialects allow an *overt* noun in the *u*-construction:

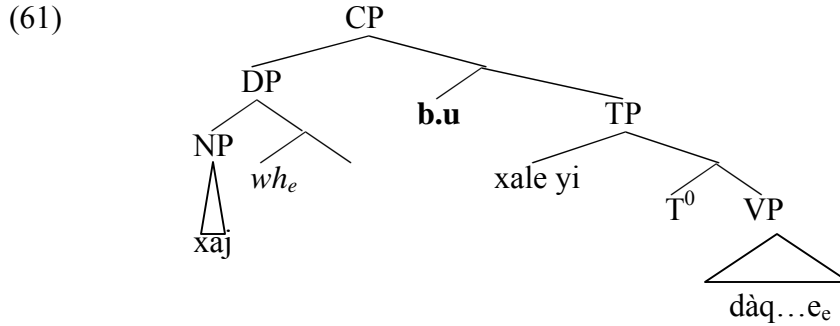
- (60) a. %**xaj b.u** xale yi dàq¹² Direct Question
 dog cl.*u* dog the.pl chase
 “which dog did the children chase?”
- b. %xam-u-ma [CP **xaj b.u** xale yi dàq] Indirect Question
 know-neg-1sg dog cl.*u* dog the.pl chase
 “I don't know which dog the children chased”

The data above make sense if some speakers have a silent “which”. That is, this comes down to a lexical difference between speakers (or dialects). I should note that the speakers I have worked with who find (60)a and b ungrammatical (e.g. the St. Louis

¹² This could also be a relative clause whose head is interpreted as indefinite:

- (i) gis-na-a **xaj b.u** xale yi dàq
 see-na-1sg dog cl.*u* child the.pl chase
 “I saw a dog that the children chased”

dialect), find them staggeringly bad as wh-questions.¹³ A sentence like (60)a is then analyzed just as the *u*-construction, but with an overt NP contained in the whDP:



The NP in the specifier of the wh-DP is able to trigger agreement on C⁰, spelled out as *y-*. Given that NP is in the specifier of DP, the features of the noun are able to percolate up to DP. This is precisely the behavior of the overt form of “which”, *cl-an*, which agrees with a noun in its specifier:¹⁴

- (62) a. *xaj b.an*
 dog cl.wh
 “which dog?”
- b.muus m.ën*
 cat cl.wh
 “which cat?”

2.5 Intermediate Summary

The two previous sections have presented the basics of the analysis for the *u*-construction. In 2.3, I argued that the *u*-forms are complementizers, while in 2.4, I presented evidence that the *u*-construction involves the presence of a silent wh-word that triggers agreement on the complementizer. Other properties of the *u*-construction noted earlier follow from the proposed analysis. Recall that *u*-forms only occur with relative

¹³ See 2.7.1 *u-Forms with Copulas* for further details.

¹⁴ Note that “which” can also precede the noun, but still agrees:

- (i) *b.an xaj*
 cl.which dog
 “which dog?”

TPs. Since the *u*-forms are complementizers, this behavior is expected because C selects for a TP. This property also explains why multiple occurrences of *u*-forms are ungrammatical. Multiple *u*-forms in a single clause would be possible if C could select for a CP. This is not possible with *-u-*. The *an*-forms are DPs and occur where other DPs do. Thus, it is possible to have multiple occurrences in a single clause. Third, it was noted that, unlike the *an*-forms, the *u*-forms do not occur in situ. Complementizers occur on the left edge of the clause in Wolof and take TP complements. Therefore, it is expected that they will not occur inside of VP, i.e. in situ.

2.6 Movement Properties of the *u*-Construction

2.6.1 Introduction

I have argued that there is a silent *wh* element in the specifier of the CP headed by *-u-*. It is this *wh* element that triggers agreement on C^0 . In this section I look at the relationship between the silent *wh*-word and TP. This is because the mere presence of a silent category in SpecCP does not say how that category got there. There are basically two options, either the silent *wh* was base generated in SpecCP or it has been moved there from lower in the structure. I will argue here that the silent *wh* in SpecCP has undergone movement from inside of TP. This will be done by showing that the *u*-construction is subject to constraints on movement and displays movement diagnostics.

2.6.1.1 Islands

The *u*-forms and *an*-forms are sensitive to both strong and weak islands. This is the strongest evidence that they are derived by movement (Ross 1967/1986):

Adjunct Island

- (63) a. *xale bi dem-na [laata Bintë togg-al Móódu laax]*
 child the leave-neutral before bintë cook-ben moodu laax
 “the child left before Binta cooked Moodu laax”

- b. ***l.an_i** l-a xale b-i dem [laata Bintë togg-al Móódu **t_i**]
 cl.an l-a child cl-def go before binte cook-ben moodu
 “what did the child go before Binte cooked Moodu?”
- c. ***l.u_i** xale b-i dem [laata Bintë togg-al Móódu **t_i**]
 cl.u child cl-def go before binte cook-ben moodu
 “what did the child go before Binte cooked Moodu?”

Coordinate Structure

- (64) a. ***l.an_i** l-a-ñu jend a-y nen ak **t_i** *an-form*
 cl.an xpl-a-3pl buy indef-cl egg and
 “what did they buy eggs and?”
- b. ***l.u_i** ñu jend a-y nen ak **t_i** *u-form*
 cl.u 3pl buy indef-cl egg and
 “what did they buy eggs and?”

Wh Island

- (65) a. ***l.an_i** l-a Dudu xam **ndax** **t_i** l-a-a jënd *an-form*
 cl.an l-a dudu know whether l-a-1sg buy
 “what does Dudu know whether I bought?”
- b. ***l.u** Dudu xam **ndax** **t_i** l-a-a jënd *u-form*
 cl.u dudu know whether l-a-1sg buy
 “what does Dudu know whether I bought?”

If the *u*-construction does not involve movement, then its sensitivity to islands is unexplained.

2.6.1.2 Reconstruction Effects

Both *u*-forms and *an*-forms display reconstruction effects for quantifier binding:

- (66) a. **k.u_i-ñu** foog ne l-a [xale b-u nekk]_i dóór *u-form*
 cl.u-3pl think that xpl-a child cl.u exist hit
 “who do they think that every child hit?”
- Wh > ∇ (“which person has the property that they think that every child hit that person?”)
 ∇ > Wh (“for each child, which person has the property that they think that that child hit that person?”)

b.**k-an**_i l-a-ñu foog ne l-a [xale bu nekk]_i dóór *an*-form
 cl-an xpl-*a*-3pl think that xpl-*a* child cl.u exist hit
 “who is it that they think that it was that every child hit?”

Wh > \forall (“which person has the property that they
 think that every child hit that person?”)
 \forall > Wh (“for each child, which person has the property
 that they think that that child hit that person?”)

It is standardly assumed that QR is clause-bound. If so, then the fact that (at least the NP part of) the Wh can be bound by the quantifier suggests that (at least the NP part of) the Wh originated in the most embedded clause.

2.6.1.3 A Wolof-specific Movement Diagnostic: Prepositional Applicatives

In Wolof, the applied suffix *-al* alternates with a preposition *ak*. The simple generalization is that the suffix is obligatory when the applied object undergoes A'-movement, and is impossible otherwise.¹⁵ Thus, if the suffix is present with *u*-forms, it indicates that A'-movement has occurred. To begin, consider a verb that alternates:

(67) jàngalekat yi daje-na-ñu *(**ak**) Isaa
 teacher the meet-neutral-3pl with isaa
 “the teachers met with Isaa”

In(67), it is seen that the verb *daje* 'meet' selects for a PP complement headed by *ak* 'with' and thus, this preposition must be present. The applied suffix is impossible when the applied object (AO) has not undergone A'-movement, and follows the verb, for example:

(68) *jàngalekat yi daje-**el**-na-ñu Isaa
 teacher the meet-appl-neutral-3pl isaa
 “the teachers met with Isaa”

The applied suffix cannot be present when the applied object is cliticized, whether P is present or not:

¹⁵ This type of distribution was first described in Koopman 1984 for Vata, a Kru language of the Ivory Coast. See also Koopman and Sportiche 1986.

- (69) *jàngalekat yi dajē-**el**-na-ñu-ko (ak) (Isaa)
 teacher the meet-appl-na-3pl-him with isaa
 “the teachers met with Isaa”

Even if the clitic has climbed under restructuring:

- (70) *jàngalekat yi bëgg-nē-ñu-**kó**-ó [_{CP} jéém-ë [_{CP} dajē-**el**]]
 teacher the want-*na*-3pl-3sg-*a* try-*a* meet-appl
 “the teachers want to try to meet him”

The example in (70) shows that it is not merely linear precedence which triggers the presence of the applied suffix, since this condition is met and yet the sentence is still ungrammatical. But, the suffix must be present when the applied object undergoes A'-movement, as in a cleft or relative clause:

- (71) a. **Isaa** l-a jàngalekat yi dajē-*(**el**) Cleft
 isaa xpl-*a* teacher the meet-appl
 “it's Isaa that the teachers met with”
- b. **Isaa**, m-i jàngalekat yi dajē-*(**el**) daanu-na Relative Clause
 isaa cl-i teacher the meet-appl fall-*na*
 “Isaa, who the teachers met with, fell down”

I conclude that the applied suffix (with the “prepositional” interpretation) is a diagnostic for A'-movement. What is relevant for the discussion here is that the applied suffix must be present when an *an*-form is clefted or when an *u*-form is present. We may therefore deduce that both *an*-questions and *u*-questions involve A'-movement into the left periphery:

- (72) a. **k-an** l-a jàngalekat yi dajē-*(**el**) an-Form
 cl-an xpl-*a* teacher the meet-appl
 “who is it that the teachers met?”
- b. **k.u** jàngalekat yi dajē-*(**el**) u-Form
 cl.u teacher the meet-appl
 “who did the teachers meet?”

Other construction types which involve A'-movement show a similar pattern. For example, *Tough*-movement, standardly analyzed as involving the movement of an empty operator.

- (73) a. *yomb-na daje ak jàngalekat yi*
 easy-*na* meet with teacher the
 “it’s easy to meet with the teachers”
- b. *jàngalekat yi yomb-na-ñu daje*(-el)* *tough-mvt*
 teacher the easy-*na*-3pl meet-appl
 “the teachers are easy to meet with”
- c. **jàngalekat yi_i yomb-na-ñu daje ak ñoom_i* *tough-mvt + PP*
 teacher the easy-*na*-3pl meet with 3pl_{strong}
 “the teachers are easy to meet with them”

Note that in (iii), the matrix predicate has a 3pl subject pronoun, therefore this is not readily analyzable as left dislocation of *jàngalekat yi*.

2.6.1.4 Island Effects in Wolof

The next set of movement properties are Wolof-specific islands related to clause type. Recall from Chapter 1 that Wolof has several different clause types, each defined by a set of (possibly overlapping) morpho-syntactic properties. Some clause types cannot be extracted out of, leaving a gap, such as neutral focus *na*-clauses and verb cleft *daf*-clauses:

- (74) a. **k.an** *l-a-ñu foog ne* [_{*na*}-CP *xale yi dóór-na-ñu-*(ko)*] *na*-clause
 cl.*an* xpl-*a*-3pl think *ne* child the.pl hit-*na*-3pl-3sg
 “who is it that they think that the children hit him?”
- b. **k.u** *ñu foog ne* [_{*na*}-CP *xale yi dóór-na-ñu-*(kó)*] *na*-clause
 cl.*u* 3pl think *ne* child the.pl hit-*na*-3pl-3sg
 “who do they think that the children hit him?”
- c. **k.an** *l-a-ñu foog ne* [_{*daf*}-CP *xale yi da-ñu-*(ko) dóór*] *daf*-clause
 cl.*an* xpl-*a*-3pl think *ne* child the.pl do-3pl-3sg hit
 “who is it that they think that the children did hit him?”
- d. **k.u** *ñu foog ne* [_{*daf*}-CP *xale yi da-ñu-*(ko) dóór*] *daf*-clause
 cl.*u* 3pl think *ne* child the.pl do-3pl-3sg hit
 “who do they think that the children hit him?”

Constructions like those in (74) have the restriction that they are only grammatical from a single level of embedding:¹⁶

- (75) ***k.u** ñu foog ne [_{na-CP} xale yi gëm-na-ñu-(**kó**)] ne [_{na-CP} dóór-na-a-**kó**]
 cl.u 3pl think that child the.pl believe-na-3pl-3sg that hit-na-1sg-3sg
 “who do they think that the children believe that I hit him?”

In (75) the silent wh-word has been extracted out of the most embedded *na*-clause, where the required resumptive clitic is necessary. Even if a resumptive clitic appears in the intermediate clause, it is still ungrammatical. Thus, *na*-CPs allow extraction (with a resumptive clitic), but they block extraction from lower clauses. What is relevant for the present discussion is that *na*-clauses and *daf*-clauses block *u*-chain formation:

- (76) a. *cl.u...na...cl.u
 ***ñ.u** sa yaay defe Isaa wax-**na-(leen)** **ñ.u** Bintë togg-al ceeb
 cl.u your mother think isaa say-na-3pl cl.u binta cook-ben rice
 “who(pl) does your mother think Isaa said Binta cooked rice for?”
- b. *cl.u...na...cl.u
 ***ñ.u** sa yaay defe *ñoom*, Isaa wax-**na-(leen)** **ñ.u** Bintë togg-al ceeb
 cl.u your mother think 3pl_{strong} isaa say-na-3pl cl.u binta cook-ben rice
 “who(pl) does your mother think that Isaa said Binta cooked rice for?”
- c. *cl.u...daf...cl.u
 ***y.u** sa yaay foog Isaa **daf-a-(leen)** wax **y.u** jigéen ji sàcc
 cl.u your mother think isaa *daf-a*-3pl say cl.u woman the steal
 “what(pl) does your mother think that Isaa said that the woman stole?”
- d. *cl.u...daf...cl.u
 ***y-u** sa yaay foog *ñoom* Isaa **daf-a-(leen)** wax **y-u** jigéen ji sàcc
 cl.u your mother think 3pl_{strong} isaa *daf-a*-3pl say cl.u woman the steal
 “what(pl) does your mother think that Isaa said that the woman stole?”

Recall from (74) and (75) that both *na*-clauses ((76)a,b) and verb cleft clauses((76)c,d) are islands for movement. In (76)a-d, neither a resumptive clitic, *leen*, nor a resumptive strong pronoun, *ñoom*, improves the ungrammaticality. The silent wh-phrase cannot be

¹⁶ I exemplify with *u*-forms and with *na*-clauses. The same facts hold for *an*-forms and for *daf*-CPs.

raised over the intermediate island. The intermediate *u*-clause and the cleft allow movement through their left peripheries (cf. Chapter 4 for the derivation of clefts.) (The fact that the presence of a clitic or a strong resumptive pronoun (which is high in the CP) in the cases in (76) does not alleviate the ungrammaticality could be explained if something in the *na*-clause or *daf*-clause and the silent *wh* must make use of the same position.)

The data in (76) suggest that *u*-chains are derived successive cyclically. The (silent) *wh*-word cannot pass through the intermediate SpecCP and ungrammaticality results. Support for this idea comes from examination of other clause types and their interaction with *u*-chain formation. The existence of *u*-chains like (77)a), shows that successive cyclic movement is possible. However, as (77)b shows it is possible for an *u*-chain to span a cleft:

- (77) a. cl.u...cl.u...cl.u
 ñ-u sa yaay defe ñ-u Isaa wax ñ-u Bintë togg-al ceeb
 cl.u your mother think cl.u isaa say cl.u binta cook-ben rice
 “who does your mother think that Isaa said that Binta cooked rice for?”
- b. cl.u...l-a...cl.u
 ñ-u sa yaay defe (noom) l-a Isaa wax ñ-u Bintë togg-al ceeb
 cl.u your mother think 3pl_{str} xpl-a isaa say cl.u binta cook-ben rice
 “who(pl) does your mother think it was that Isaa said Binta cooked rice for?”

This is expected if cleft formation precedes successive cyclically, as in the tricausal clefts below (marked by “l-a”):

-
- (78) **lan_i** l-a-ñu wax ne **t_i** l-a Isaa defe ne **t_i** l-a Bintë di togg **t_i**
 what xpl-a-3pl say ne xpl-a isaa think ne xpl-a binta di cook
 “what did they say that Isaa thinks that Binta will cook?”


Evidence that cleft formation is successive cyclic comes from the fact that if *something else* is clefted in an intermediate clause, a cleft cannot span it:

- (79) ***k.an** l-a-ñu wax ne [_{cleft-CP} Isaa mo o defe ne [_{cleft-CP} l-a Bintë di dóór]]
 cl.an xpl-a-3pl say ne isaa 3sg a think ne xpl-a binta di hit
 “who did they say that it’s Isaa who thinks that Binta will hit?”

In (79), in the intermediate clause, *Isaa* has been clefted (a subject cleft). Significantly, the same configuration blocks *u*-chain formation:

- (80) a. foog-na-ñu Isaa l-a Bintë wax ne Maryam di-na togg jën yi
 think-na-3pl isaa xpl-a binta say ne maryam di-na cook fish the
 “they think that it’s Isaa who Binta told that Maryam will cook the fish”
 b. ***y.u** ñu foog **k.an** l-a Bintë wax ne **y.u** Maryam di togg
 cl.u 3pl think cl.an xpl-a binta tell ne cl.u maryam di cook
 “what(pl) do they think who is it that Binta told what Maryam will cook?”
 c. ***y.an** l-a-ñu foog **k.an** l-a Bintë wax ne **y.u** Maryam di togg¹⁷
 cl.an xpl-a-3pl think cl.an xpl-a binta tell ne cl.u maryam di cook
 “what(pl) do they think who is it that Binta told what Maryam will cook?”

Cases like (80)b-c would be expected to be grammatical if the *wh*-word (silent or overt) could skip the intermediate cleft position:

- 
- (81) ***wh_i** y.u ñu foog [_{cleft-CP} **k.an** l-a Bintë wax ne [_{u-CP} **t_i** y.u Maryam di togg **t_i**]]
 cl.u 3pl think cl.an xpl-a binta tell ne cl.u maryam di cook
 “what(pl) do they think who is it that Binta told what Maryam will cook?”

Interestingly, if the intermediate *Wh* is not clefted, then an *u*-chain can span the cleft (The cleft clause is underlined.):

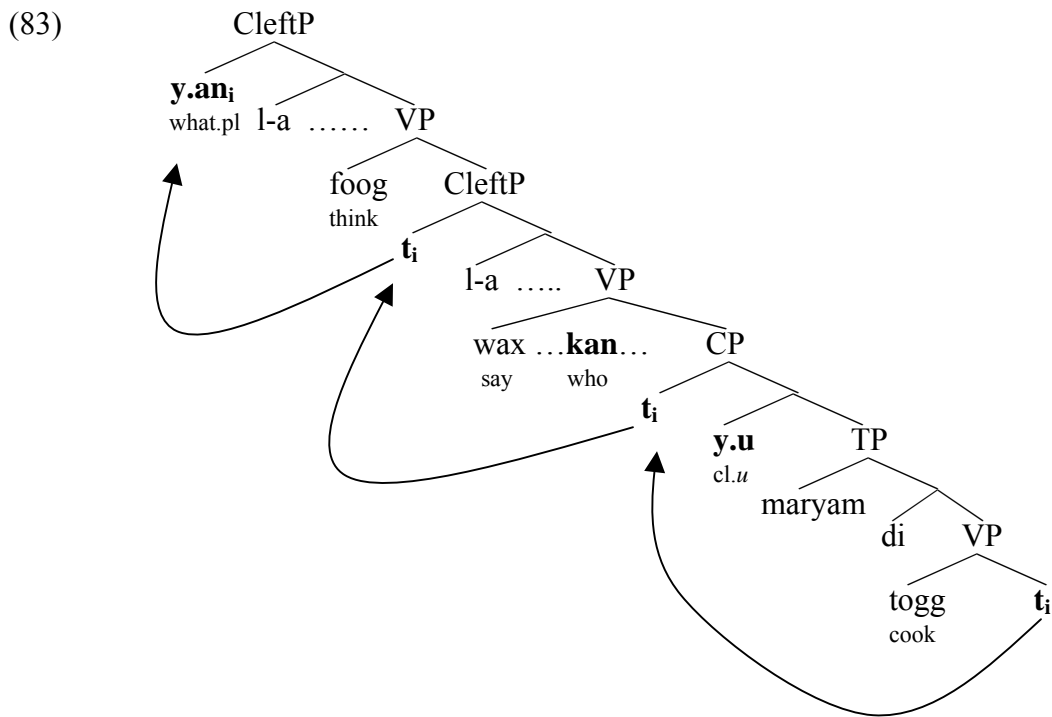
- (82) a. [_{CP} **y.u** ñu foog [_{CP} l-a Bintë wax **k.an** ne [_{CP} **y.u** Maryam di togg]]]
 cl.u 3pl think xpl-a binta tell cl.an ne cl.u maryam di cook
 “what(pl) do they think who is it that Binta told what Maryam will cook?”

¹⁷ The same grammaticality facts hold whether the intervening clefted constituent is a +*wh* or not.

b. [_{CP} **y.an** l-a-ñu foog [_{CP} l-a Bintë wax **k-an** ne [_{CP} **y.u** Maryam di togg]]]
 cl.an xpl-a think xpl-a binta tell cl-an ne cl.u maryam di cook
 “what(pl) do they think who is it that Binta told what Maryam will cook?”

As the translations indicate, (82)a-b are interpreted as multiple wh-questions.

Incidentally, (82)a-b also show that it is not merely the *presence* of a wh in the intermediate clause that is the source of the ungrammaticality in (80)b and c. That is, (80)b and c are not reducible to Wh island violations. Cases like (82)a can be represented as:



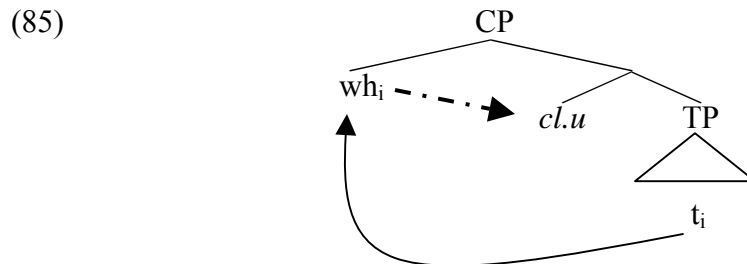
Finally, consider the interaction of multiple *u*-chains. It was shown that *u*-chains can be formed from quite embedded clauses (e.g. (77)a). It is expected that if there is an intervening *u*-form which is *not* a member of the chain, this too should lead to ungrammaticality, as it would block successive cyclic movement of the silent wh:

- (84) a. * $[_{CP} \mathbf{y.u}$ xale bi defe $[_{CP} \mathbf{k.u}$ Bintë wax $[_{CP} \mathbf{y.u}$ Isaa di togg]]]
 cl.u child the think cl.u binta tell cl.u isaa di cook
 “what(pl) does the child think who did Binta tell what(pl) will Isaa cook?”
- b. * $[_{CP} \mathbf{y.an}$ l-a xale bi defe $[_{CP} \mathbf{k.u}$ Bintë wax $[_{CP} \mathbf{y.u}$ Isaa di togg]]]
 cl.an xpl-a child the think cl.u binta tell cl.u isaa di cook
 “what(pl) does the child think who did Binta tell what(pl) will Isaa cook?”

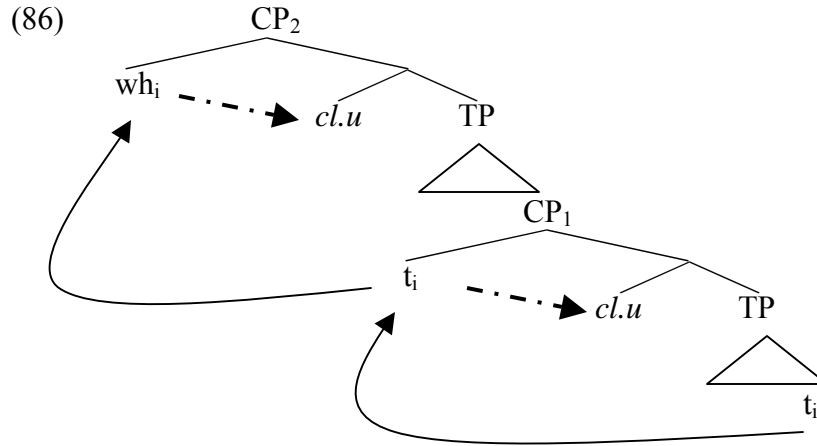
The *u*-form that intervenes between the two links of the *u*-chain prevents the cyclic movement of the silent *wh*, as expected.

2.6.2 Conclusions

The goal of this section was to examine the movement properties of the silent *wh*-word posited from the analysis of distribution of the *u*-forms. Strong support for a movement analysis comes from the fact that the *u*-construction is island-sensitive. The distribution of the applied suffix provides an additional, language-specific test that leads to the same conclusion, namely that the silent *wh*-word originates inside of TP and raises to SpecCP. That *u*-chain formation is strictly successive cyclic shows that the silent *wh*-phrase, wh_i , is subject to the same movement operations as the overt *wh*-phrases, the *an*-forms. Thus, by both crosslinguistic and language-specific criteria, the *u*-construction is derived by movement of the silent *wh*-word to SpecCP. The discussion of agreement argued that the silent *wh*-word triggers class agreement on C^0 . Drawing together these threads, the basic *u*-construction is represented as below (where the dotted line represents agreement):



It was also concluded that extraction of the silent *wh*-phrase from embedded clauses proceeded successive cyclically, just as with overt *wh*-phrases:



2.7 Problems, Puzzles, and Prospects

In this section, I build on the basic analysis presented and move to discussion of points related to it. Specifically, I look at the distribution of *an*-forms in *u*-clauses, the complementary distribution of the *u*-form with other C^0 s, pied piping of overt NPs, and coordination.

2.7.1 *u*-Forms with Copulas

I noted earlier that some dialects have a silent version of *which*:

- (87) %xaj **b.u** ñu gis
 dog cl.u 3pl see
 “which dog did they see?”

I also noted that speakers who do not use overt nouns in the *u*-construction find cases like (87) to be staggeringly bad as questions. It is therefore quite surprising that speakers who do not allow (87) do allow (88)b and d below:

- (88) a. gis-na-a a.b xaj statement
 see-na-1sg indef.cl dog
 “I saw a dog”

- b.xaj **b.u** mu (di)? follow up to (88)a
 dog cl.u 3sg di
 “which dog is it?”
- c.gis-na-a ay xaj statement
 see-na-1sg indef.cl dog
 “I saw some dogs”
- d.xaj **y.u** ñu (di) follow up to (88)c
 dog cl.u 3pl di
 “which dogs are they?”

That is, if the clause is copular, it is grammatical to have the silent *which* with an overt noun in the *u*-construction. It is not clear why predicate type should matter.

2.7.2 *an*-Forms in *u*CPs

An *an*-form is compatible with a matrix CP_{-u}, but only if a silent wh-word is also present.

In that case, the silent wh-word invariably raises to SpecCP:

- (89) a. ***l.u** xale yi lekk foofu
 cl.u child the eat there
 “what did the children eat there?”
- b.**l.u** ñ.an lekk foofu
 cl.u cl.an eat there
 “who(pl) ate what there?”

Note that in (89)b, although the *u*-form and *an*-form appear to be adjacent, if present, clitics will intervene between them, just with a non-wh subject (*ñ-an* is the subject below):

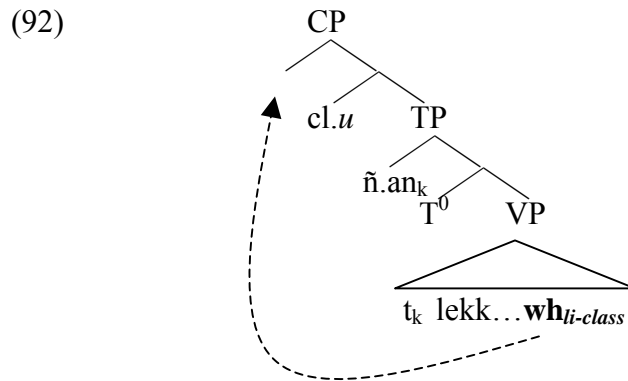
- (90) **n.u** leen-ko-fa ñ.an togg-e-woon démb¹⁸
 cl.u 3pl-3sg-loc cl.an cook-manner-past yesterday
 “how did who cook it for them there yesterday?”

It is also noteworthy that the *an*-form cannot precede the *u*-form:

¹⁸ I have been able to detect only very weak Superiority effects in Wolof.

- (91) a. **ñ.u** jox xale yi **lan** *u..an*
 cl.u give child the.pl cl.an
 “who(pl) gave what to the children?”
- b. ***lan ñ-u** (ko) jox xale yi **an...u*
 cl.an cl.u 3sg give child the.pl
 “who(pl) gave what to the children?”

Consider an intermediate representation of (89)b:



We know from the existence of mixed *u*-chains that *-u-* can attract and agree with an *an*-form. In the tree in (92), the *an*-form, *ñ.an* is closer to the complementizer than the silent *wh*-phrase, *wh_i*. If this is indeed the correct representation, it is not clear how the silent *wh* can be attracted. That is, (89)b/(92) represent Superiority violations. It is likely that this is due to the properties of the *an*-form. As I discuss in Chapter 4 *Clefts*, *an*-forms are *which* phrases. As such, they are expected to be immune to Superiority effects. However, this cannot be the complete explanation. This is because the *u*-construction can be used to ask questions with a D-linked interpretation. It is therefore not clear why the silent *wh* cannot remain in situ, like the *an*-forms. That is, the expectation is that a sentence like (93) should be able to have at least an echo question interpretation (recall that *na*-clauses are not compatible with real *wh*-questions in the simple case here), with the silent *wh* in situ.

- (93) #xool-na-ñu **wh_i**
 look.at-na-3pl
 “they looked”
 *”what did they look at?”

2.7.3 Extraction Through Clefts

According to the analysis, the silent *wh*, only occurs with *-u-*. However, there have been several examples with an *u*-form in a matrix clause and a cleft lower down:

- (94) [CP-*u-* [Cleft]]
 [CP **k.u** ma foog ne [CP **l-a** bintë dóór]]
 cl.*u* 1sg think that xpl-*a* binta hit
 “who do I think that Binta hit?”

However, the opposite configuration yields ungrammaticality:

- (95) *[Cleft [CP-*u-*]]
 *[CP **l-a-a** foog ne [CP **k.u** bintë dóór]]
 xpl-*a*-1sg think that cl.*u* binta hit
 “who do I think that Binta hit?”

Cases like (95) are problematic because it is not clear why the silent *wh* cannot surface in a cleft. Example (94) shows that the silent *wh* can pass through the specifier of the cleft(, leaving a trace). That is, there need not be any overt material in the cleft position. The same problem arises in a simple matrix cleft, where the silent *wh* cannot occur.

- (96) a. ***wh_i** l-a-ñu dóór **t_i**
 xpl-*a*-3pl hit
 “who did they hit?”

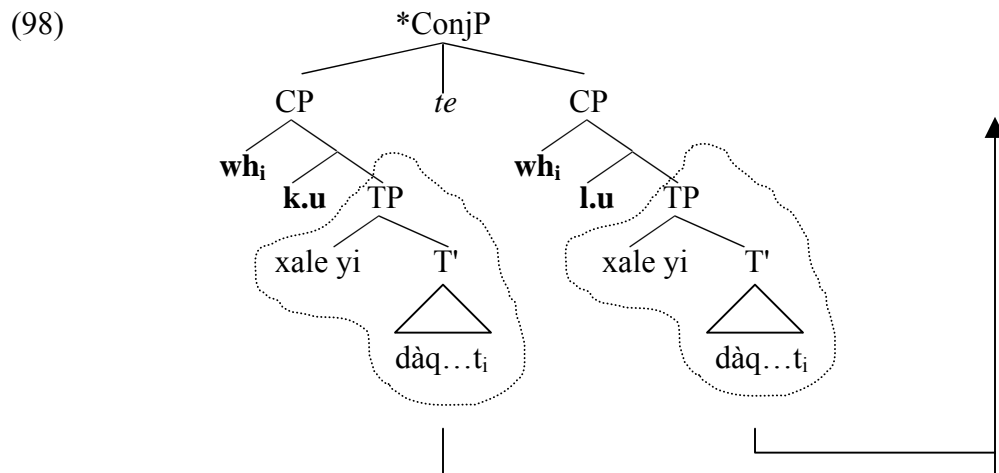
It appears then that the silent *wh* can be clefted, so long as *wh* can eventually reach the necessary SpecCP position, which is the specifier of a CP headed by *-u-*. I leave the resolution of this as an open problem. Note, however, that clefts do *not* display agreement.

2.7.4 Coordination

That the *u*-forms cannot be coordinated (with either *ak* or *te*) brings to light another puzzle. Recall the paradigm:

- (97) a. **k.an** ak **l.an** l-a xale yi dàq? an-forms
 cl-an and cl.an xpl-a child the chase
 “who and what is it that the children chased?”
- b. ***k.u** ak **l.u** xale yi dàq u-forms with ak
 cl.u and cl.u child the chase
 “who and what did the children chase?”
- c. ***k.u** te **l.u** xale yi dàq u-forms with te
 cl.u and cl.u child the chase
 “who and what did the children chase?”

In (97)a, two DPs are coordinated with *ak*, the DP coordinator. (97)b is ungrammatical because *k.u* and *l.u* introduce CPs and *ak* coordinates DPs. Since *te* coordinate VP/CPs, (97)c might be predicted to be grammatical. This is because it could arise by coordination of two CPs followed by Right Node Raising of TP. It could be excluded because the *u*-forms are clitics and therefore uncoordinable (Kayne 1975). Alternatively, (97)c could be explained if Right Node Raising or ellipsis of the relative TP of the first conjunct could be blocked. That is, we want to block:



In this light, consider (99):

- (99) **k.an** ak **l.u** ñu dàq ca lekkool ba¹⁹
cl.an and cl.u 3pl chase at school the
“who and what did they chase at school?”

There are two things to note in (99). First, the DP coordinator *ak* is used, although this is supposed to be CP coordination. Second, it shows that *u*-forms can coordinate, unlike canonical clitics, e.g. subject clitics in French:

- (100) ***Marie** et **il** ont/a mangé le gâteau²⁰
marie and he have.3pl/have.3sg eaten the cake
“Marie and him have eaten the cake”

In (100), the TP has been retained for the subject clitic and yet it still cannot be coordinated. In addition, it looks as though TP has undergone RNR in (99). The acceptability of (99) suggests that it is the fact that RNR strips away the phonological host for the first *u*-form coordinate in (97)b that accounts for the ungrammaticality. This finds support from the fact that the order of the *an*-form and *u*-form in (99) cannot be reversed:

- (101) ***l.u** ak **k.an** l-a-ñu dàq ca lekkool ba
cl.u and cl-an xpl-a-3pl chase at school the
“what and who is it that they chased at school?”

If (99) is a case of RNR, it indicates that the *an*-form, *kan*, in the first conjunct must have originated in a CP by itself. We know that this is possible independently, given the existence of mixed *u*-chains. At the same time, it implies that the *an*-form has actually undergone raising out of the *u*-clause. However, it is not clear where the *an*-form could be raising to in the *u*-CP, nor is it clear why an *an*-form cannot raise to this position in a canonical matrix *u*-CP.

¹⁹ Thanks to Satoshi Tomioka for suggesting that I look at cases like (99).

²⁰ Thanks to Dominique Sportiche (p.c.) for the judgements.

2.8 Chapter Summary

The main analytical conclusion of this chapter is that Wolof has a set of silent *wh*-words. The putative *wh*-words, the *u*-forms, are agreeing complementizers. Specifically, it has been shown that the silent *wh*-words undergo A'-movement to SpecCP, where CP is headed by *-u-*. This puts the *wh*-word and complementizer in the canonical spec-head agreement configuration, displayed overtly as class agreement on *-u-*. This analysis was supported by the existence of mixed *u*-chains, in which overt *wh*-words, the *an*-forms, trigger agreement on C. That the *u*-construction involves movement of the silent *wh*-word was shown through (general and language-specific) island phenomena and other movement diagnostics. However, some open problems remain.

Appendix 1 Additional Properties of *u*-Chains

Multiple Embeddings

The judgments with multiple embeddings are somewhat intricate and subtle. Once there is more than one level of embedding, the sentences are said to be “heavy” by my consultant. In addition, subject/object asymmetries are apparent. For example, subjects are judged to be not unacceptable, but strange in multiple embeddings:

- (102) *u...u...u*
 ??[_{CP} **k.u** xale yi foog [_{CP} **k.u** jigéén ji wax [_{CP} **k.u** lekk gato bi]]]
 cl.u child the think cl.u woman the say cl.u eat cake the
 “who do the children think that the woman said ate the cake?”

Similarly, the presence of the subordinator *ne*, fine with *u*-chains formed on direct objects under one embedding, become rather degraded under two embeddings (although not ungrammatical)

- (103) *u...u...ne...u*
 ??**ñ.u** xale bi foog **ñ.u** jigéén ji wax *ne* **ñ.u** Bintë dóór
 cl.u child the think cl.u woman the say that cl.u binta hit
 “who does the child think the woman said that Binta hit?”

To round out the picture, multiply embedded locative adjunct *u*-chains are fine with the subordinator *ne*:

- (104) *u...u...ne...u*
f.u xale bi foog **f.u** jigéén ji wax *ne* **f.u** Bintë jàng-e tééré bi
 cl.u child the think cl.u woman the say that cl.u binta read-loc book the
 “where does the child think that the woman said that Binta read the book?”

Clausal pied piping is possible with *u*-chains:

- (105) a. [_{CP} [_{CP} **wh_i** **k.u** ñu dóór-óón **t_i**]_j **k.u** Bintë foog **t_j**]
 cl.u 3pl hit-past cl.u binta think
 “who does Binta think they hit?”
 d. [_{CP} **k.an** l-a-ñu dóór-óón, [_{CP} **k.u** Bintë foog]]
 cl.an xpl-a-3pl hit-past cl.u binta think
 “who does Binta think they hit?”

A non-wh NP/DP cannot be clefted out of a CP headed by *-u-*, as shown below:

- (106) a. *[**xale (b.i)**]_j l-a-ñu foog [_{CP} **t_j b.u** Isaa dóór **t_j**]
 child cl.def xpl-a-3pl think cl.u isaa hit
 “it's the child that they think that Isaa hit”
- b. [**b.an xale**]_j l-a-ñu foog [_{CP} **t_j b.u** Isaa dóór **t_j**]
 cl.an child xpl-a-3pl think cl.u isaa hit
 “which child is it that they think Isaa hit?”

Complementizer Effects

Subject *u*-chains are sometimes incompatible with the presence of the subordinator *ne*.

Non-subject *u*-chains are generally immune to this:

- (107) a. **k.u**-ngeen wax (***ne**) **k.u** sàcc gato bi Subject
 cl.u-2pl say *ne* cl.u steal cake the
 “who did y'all say stole the cake?”
- b. **l.u** Bintē foog (**ne**) **l.u** sa xarit tóx Direct Object
 cl.u binta think *ne* cl.u your friend smoke
 “what does Binta think that your friend smoked?”
- c. **n.u** ñu defe (**ne**) **n.u** ma ubbé-é bunt yi Adjunct
 cl.u 3pl think *ne* **cl.u** 1sg open-mann door the
 “how do they think that I opened the door?”

This is reminiscent of a *that-t* effect. the effect of the complementizer is dependent on the embedded clause type. If the embedded clause is a cleft, for instance, the co-occurrence of the complementizer and embedded subject extraction is fine (with an obligatory resumptive pronoun, *mu* ‘3sg’), as in (108) below:

- (108) k.an ngeen wax (**ne**) *(**mu**) a lekk jën wi (cf. (107)a)
 cl.an xpl-a-2pl say *ne* 3sg a eat fish the
 “who is it that y'all said that ate the fish?”

An *an*-form with a definite article may also be used in an *u*-chain:

- (109) **k.an k.i** l-a-ñu wax **k.u** sàcc gato bi
 cl.an cl.def xpl-a-3pl say cl.u steal cake the
 “who is it that they said stole the cake?”

An *u*-chain can also be used in a relative clause. In that case, it has only a non-specific indefinite interpretation:

- (110) a. di-na-a dóór [DP **k.u** y sàcc gato] relative clause
 di-na-1sg hit cl.u di steal cake
 “I will hit whoever steals a cake”
 “I will hit a certain person who steals a cake”
- b. di-na-a dóór [DP **k.u** ñu defe **k.u** sàcc gato] *u*-chain relative clause
 di-na-1sg hit cl.u 3pl think cl.u steal cake
 “I will hit whoever they think stole a cake”
 *”I will hit a certain person who they think stole a cake”

This reading is facilitated by the imperfective, and is difficult to get in an episodic context:

- (111) *??gis-na-a **k.u**-ñu defe **k.u** sàcc gato
 see-na-1sg cl.u-3pl think cl.u steal cake
 “I saw someone who they think stole a cake”

Predicate Selection in u-Chain Formation

The grammaticality of *u*-chains is dependent on the selecting predicate and hence, on the clause type that that predicate may select for. This dependency is seen most clearly in +interrogative selecting verbs, subjunctive-selecting verbs, and raising adjectives.

Interrogative Selecting Predicates

Consider first the distinction between two types of verbs that select for +Q clauses, *xam* ‘know’ versus *laaj* ‘ask’:

- (112) a. laaj-na-a Bintë **k.u** togg ceeb bi
 ask-na-1sg binta cl.u cook rice the
 “I asked Binta who cooked the rice”
- b. laaj-na-a Bintë **ndax/ndegem** togg-na ceeb bi
 ask-na-1sg binta whether/whether cook-na rice the
 “I asked Binta whether she cooked the rice”
- c. ***k.u** ñu laaj Bintë **k.u** togg ceeb bi subject *u*-chain
 cl.u 3pl ask binta cl.u cook rice the
 “who did they ask Binta who cooked the rice?”
- d. ***l.u** ñu laaj Bintë **l.u** sa yaay togg object *u*-chain
 cl.u 3pl ask binta cl.u your mother cook
 “what did they ask Binta what your mother cooked?”

As the examples show, neither subject nor object *u*-chains can span a predicate like *laaj* 'ask'. As distinct from an *u*-chain across *laaj* 'ask' an *u*-chain can span +Q selecting predicate like *xam* 'know':

- (113) a. *xam-na-a k.u yàq tabax yi*
 know-*na*-1sg cl.u destroy building the
 "I know who destroyed the buildings"
- b. **k.an ngeen xam (ne) k.u yàq tabax yi* subject *u*-chain
 cl.an xpl+*a*+2pl know *ne* cl.u destroy building the
 "who do y'all know who destroyed the buildings?"
- c. *y.an ngeen xam (*ne) y.u Dudu yàq* object *u*-chain
 cl.an xpl+*a*+2pl know *ne* cl.u dudu destroy
 "what(pl) do y'all know what Dudu cooked?"

There is a subject/object asymmetry in that a subject ((113)b) *u*-chain is ungrammatical, while a direct object *u*-chain is acceptable ((113)c). Note that a subject *u*-chain cannot be formed across a +Q selecting predicate does not follow from its subjecthood. This can be seen from the fact that a subject can be extracted from an embedded cleft clause over *xam* and *laaj*:

- (114) a. *k.u ngeen xam (ne) mu a yàq tabax yi*
 cl.u 2pl know *ne* 3sg *a* destroy building the
 "who do y'all know that it's him that destroyed the buildings?"
- b. *k.an l-a-ñu laaj mu a yàq tabax yi*
 cl.an xpl-*a*-3pl ask 3sg *a* destroy building the
 "who did they ask it's him that destroyed the buildings?"

A number of +Q predicates show this subject/object asymmetry with respect to *u*-chain formation. That is, a subject cannot form an *u*-chain, but an object can do so. These include: *gëstu* 'investigate', *fàtte* 'forget', *wax* 'tell', and *xam* 'know'. These also have the property that the presence of the subordinator *ne* renders the structures ungrammatical, even for non-subjects (see (113)c). Only one Wh-selecting predicate that I have found allows both subject and object *u*-chain formation, *birlé* ~ *birélé* 'find out':

- (115) a. k-an l-a-ñu birlé (*ne) k.u sàcc gato yi Subject
 cl-an xpl-a-3pl find.out ne cl.u steal cake the
 “who did they find out who stole the cakes?”
- b. k.u-ñu birlé (ne) k.u Isaa dàq Object
 cl.u-3pl find.out ne cl.u isaa chase
 “who did they find out who did Isaa chase?”

Unlike other +Q predicates, a direct object *u*-chain can span *birlé* ‘find out’, even when the subordinator *ne* is present. But, note that even with such a permissive predicate, subject *u*-chain formation is blocked by the presence of *ne*.

If the embedded clause is of the proper type, it is possible to extract either an *u*-form or an *an*-form from under a +Q predicate.²¹

- (116) k.u ñu laaj Binta [_{cleft CP} moom mu a togg ceeb bi]
 cl.u 3pl ask binta 3sg_{str} 3sg a cook rice the
 “who_i did they ask Binta did he_i cook the rice?”
 (“who did they ask Binta, him, was it him who cooked the rice?”)

Neither subject nor object *u*-chains can span the complementizer *ndax* ‘if, whether’:

- (117) a. *k.an nga fätte ndax k.u jàng tééré bi
 cl.an xpl+a+2sg forget whether cl.u read book the
 “who did you forget whether read the book?”
- b. *l.u a fätte ndax l.u Bubē jàng
 cl.u 2sg forget whether cl.u buba read
 “what did you forget whether Buba read?”

(116) shows that it is possible to extract a silent wh out of a clause embedded under *laaj* ‘ask’, extraction from a cleft is fine. However a resumptive pronoun is necessary, even for non-subjects.

²¹ Note that the resumptive strong pronoun is obligatory here for subject extraction. The point is that the requirements for extracting out of CPs under a +Q selecting predicate are different from those for extracting out of a non-*u*CP under a +Q selecting predicate.

These data are summarized in the table below:

(118) *u*-chain formation across interrogative selecting predicates

Predicate		S <i>u</i> -chain	DO <i>u</i> -chain	ne
fätte	‘forget’	*	✓	*
gëstu	‘investigate’	*	✓	*
wax	‘tell, say’	*	✓	*
bir(ë)lé	‘find out’	✓	✓	✓
laaj	‘ask’	*	*	*
bëgg xam ²²	‘wonder’	*	✓	N/A
tandale	‘guess’	??*	*	N/A
yëg	‘find out’	✓ ²³	✓	*
natap	‘guess’	✓	✓	*

Subjunctive Selecting Predicates

Like Romance, subjunctive clauses in Wolof are found embedded under predicates of desire, prohibition, command, etc.

(119) a. bëgg-në-ñu-(*më) ma togg-leen
 want-*na*3pl-1sg 1sg cook-3pl
 “they want me to cook them”

b. tere-na-ñu-ma (ma) togg-leen
 prevent-*na*-3pl-1sg 1sg cook-3pl
 “they prevented me from cooking them”

c. digël-në-ñu-më *(ma) togg-leen
 advise-*na*-3pl-1sg 1sg cook-3pl
 “they advised me I cook them”

As the examples show, there are (at least) three distinct classes of subjunctive clauses, based on the impossibility, optionality, or obligatoriness of the logical subject of the

²² More literally, “want to know”.

²³ The “→” is for a mixed *u*-chain headed by an *an*-form:

(i) **k.an** l-a-ñu yëg **k.u** Isaa dóór
 cl.*an* xpl-*a*-3pl find.out cl.*u* isaa hit
 “who is it that they found out who Isaa hit?”

(ii) ***k.u** ñu yëg **k.u** Isaa dóór
 cl.*u* 3pl find.out cl.*u* isaa hit
 “who did they find out who Isaa hit?”

This is the only instance of a difference between simple *u*-chain formation and mixed *u*-chain formation.

embedded predicate being represented in both the matrix and the subjunctive clause.²⁴

For *bëgg* ‘want’, the logical subject of the subjunctive predicate cannot appear in the matrix clause. This differs from *tere* ‘prevent’, for which the logical subject of the subjunctive can be PRO, while also being pronounced in the matrix clause.²⁵ These two differ from *digal* ‘advise’, where the logical subject of the subjunctive predicate must be pronounced in both the embedded clause and the matrix clause. These three subjunctive types correspond to two distinct patterns of *u*-chain formation. The first type, exemplified by *bëgg* ‘want’ and *tere* ‘prevent’ is incompatible with *u*-chain formation:

- (120) a. *bëgg-na-nu* Isaa jënd yàmbaa ji +Subjunctive Predicate
 want-na-1pl isaa buy marijuana the
 “we want Isaa to buy the marijuana”
- b. **k.u** nu *bëgg* **k.u** jënd yàmbaa ji²⁶ +Subjunctive Predicate
 cl.u 1pl want cl.u buy marijuana the Subject
 *”who do we want to buy the marijuana?”
 ➔ “who do we like who bought the marijuana?”
 (i.e. “among the people who bought the marijuana, which one do we like?”)
- c. **k.an** l-a-nu *bëgg* **k.u** jënd yàmbaa ji +Subjunctive Predicate
 cl.an xpl-a-1pl want cl.u buy marijuana the Subject
 *”who do we want to buy the marijuana?”
 ➔ “who do we like who bought the marijuana?”
 (i.e. “among the people who bought the marijuana, which one do we like?”)
- d. **l.u** nu *bëgg* **l.u** Isaa jënd +Subjunctive Predicate
 cl.u 1pl want cl.u isaa buy Direct Object
 *”what do we want Isaa to buy?”
 ➔ “what do we like that Isaa bought?”
 (i.e. of what Isaa bought, what do we like?)

²⁴ This can be seen from the fact that in some cases the embedded subject cannot become a clitic in the matrix clause, while in others it can.

²⁵ Predicates like *tere* may also take the subordinator *ne*. In that case, the embedded (overt pronoun) subject cannot be suppressed.

(i) *tere-na-ñu-ma ne *(ma) togg*
 prevent-na-3pl-1sg *ne* 1sg cook
 “they prevented that I cook”

²⁶ The verb *bëgg* means both ‘like/love’ and ‘want’.

e.**l.an** l-a-nu bəgg **l.u** Isaa jënd +Subjunctive Predicate
 cl.an xpl-a-1pl want cl.u isaa buy Direct Object
 *”what do we want Isaa to buy?”
 → “what do we like that Isaa bought?”
 (i.e. of what Isaa bought, what do we like?)

The examples above show that the only available interpretation of an *u*-chain across *bəgg* is that of an extraposed relative clause, not that of an interrogative. While an *u*-chain is not possible across *bəgg*, a simple wh-question is possible:

(121) a.**l.u** Bintë bəgg [CP ma jënd-(kó)]
 cl.u binta want 1sg buy-3sg
 “what does Binta want me to buy?”

b.**l.an** l-a Bintë bəgg [CP ma jënd-(ko)]
 cl.an xpl-a binta want 1sg buy-3sg
 “what does Binta want me to buy?”

A wh-question can also be formed if the clause with the *u*-CP has been pied piped with the silent wh:

(122) [CP **l.u** nu togg-al xale yi] l-a Isaa bəgg
 cl.u 1pl cook-ben child the xpl-al isaa want
 “that we cook what for the children is it that Isaa wants?”

We know that a wh can be extracted out of the subjunctive complement of *bəgg* ((121)) and that CP pied piping also leads to a real question ((122)). Note that, as with *bəgg*, *tere* ‘prevent’, disallows *u*-chain formation:

(123) ***y.an** l-a-ñu-ko tere **y.u** mu togg
 cl.an xpl-a-3pl-3sg prevent cl.u 3sg cook
 “what(pl) did they prevent him from cooking?”

The second type of subjunctive-selecting predicate allows *u*-chain formation on non-subjects:²⁷

- (124) a. digal-na-a-léén ñu jàng tééré bi yëpp
 advise-*na*-1sg-3pl 3pl read book the completely
 “I advised them they read the book completely”
- b. ***k.u** a digal **k.u** lekk gato yi Subject
 cl.u 2sg advise cl.u eat cake the
 “who did you advise who to eat the cakes?”
- c. **y.u** a-ko digal **y.u** mu lekk Direct Object
 cl.u 2sg-3sg advise cl.u 3sg eat
 “what(pl) did you advise him he eat?”
- d. **y.an** nga-ko digal **y.u** mu lekk Direct Object
 cl.*an* xpl+*a*+2sg-3sg advise cl.*u* 3sg eat
 “what(pl) did you advise him he eat?”

A subtype of this second type of subjunctive is found under predicates that which select for both subjunctive and optionally an overt complementizer:

- (125) tinu-na-a-kó (ci) *mu lekk gato yi
 beg-*na* 1sg-3sg_{obj} P 3sg eat cake the
 “I begged him to eat the cakes”

Under canonical wh extraction, if the complementizer is present, a resumptive pronoun is obligatory (for both an- and u-forms):

- (126) a. **y.o** o-ko tinu ci *(mu) lekk-*(**leen**) *u*-form
 cl.*u* 2sg-3sg beg P 3sg eat-3pl
 “what(pl) did you beg him that he eat them?”

²⁷ That *u*-chains cannot be formed on subjects in these clauses probably has nothing to do with the embedded clause type. Instead, as (124)a shows, the advisee is represented in both the matrix clause, *léén*, and in the embedded clause, as *ñu*. The embedded subject is inaccessible to movement operations, or at least those that will move it to a position where it c-commands its antecedent in the matrix. Even simple Wh movement of the embedded subject in (124)a would be expected to give rise to a Condition B violation (since the pronoun in the matrix would be bound in its governing category) and yield a Strong Crossover configuration (i.e. a Condition C violation), as the Wh trace would be c-commanded by the coindexed matrix pronoun *léén*.

b.**y.an** nga-ko tinu ci *(mu) lekk-*(**leen**) an-form
 cl.*an* xpl+a+2sg-3sg beg P 3sg eat-3pl
 “what(pl) is it that you begged him that he eat them?”

u-Chain formation is incompatible with the presence of the prepositional complementizer.²⁸

(127) a.**l.u** a-ko tinu (*ci) **l.u** mu lekk
 cl.u 2sg-3sg beg P cl.u 3sg eat
 “what did you beg him what he eat?”

b.**l.an** nga-ko tinu (*ci) **l.u** mu lekk
 cl-an xpl+a+2sg-3sg beg P cl.u 3sg eat
 “what is it that you begged him what he eat?”

This complementizer effect was noted previously with the +Q selecting predicates, where the presence of the subordinator *ne* induces ungrammaticality. But, not all +Q selecting predicates pattern like this.

Appendix 2 *PP Pied-Piping and Genitives*

The *u*-forms that correspond to PP complements can optionally be used to form wh questions:

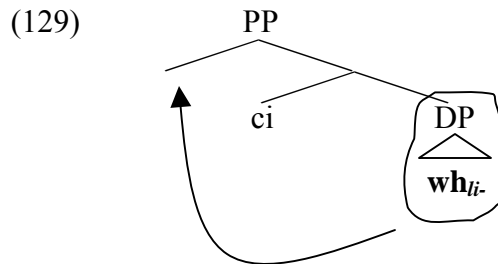
(128) a. teg-na-ñu tééré bi **ci** taabal ji
 put-na-3pl book the P table the
 “they put the book on the table”

²⁸ The complementizer *ci* also blocks clitic movement out of a non-finite clause, otherwise acceptable:

- | | | |
|--|---|--|
| (i) | da-ma dogu ci jënd-kó | Clitic low |
| | <i>da</i> -1sg decide P buy-3sg | |
| | “I DECIDED to buy it” | |
| (ii) | *da-ma-ko dogu ci jënd | *Clitic restructured over C ⁰ |
| | <i>da</i> -1sg-3sg decide P buy | |
| | “I DECIDED to buy it” | |
| Instead, clitic climbing requires <i>-a-</i> , impossible if the has <i>not</i> climbed: | | |
| (iii) | da-ma-ko dogó-ó jënd | Clitic restructured over C ⁰ |
| | <i>da</i> -1sg-3sg decide- <i>a</i> buy | |
| | “I DECIDED to buy it” | |
| (iv) | *da-ma dogó-ó jënd-kó | *Clitic low |
| | <i>da</i> -1sg decide- <i>a</i> buy-3sg | |
| | “I DECIDED to buy it” | |

- b.(ci) l.u ñu teg tééré bi²⁹
 P cl.u 3pl put book the
 “(at) what did they put the book?”

Note that it is the object of the preposition that triggers the class agreement on *-u-*. That the complementizer agrees with the complement of the preposition *ci* suggests that the wh complement has raised to SpecPP:



This possibility is instantiated overtly with the *an*-forms:

- (130) a. [_{PP} **ci f.an**] l-a-ñu teg tééré bi
 P cl.an xpl-a-3pl put book the
 “at where did they put the book?”
- b. [_{PP} **f.an ci**] l-a-ñu teg tééré bi
 cl.an P xpl-a-3pl put book the
 “at where did they put the book?”

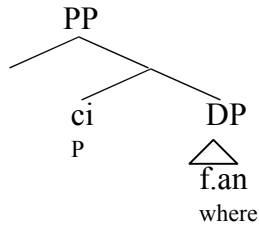
It can be seen that the *an*-form, *f.an* ‘where’, can either follow ((130)b) or precede ((130)a) the preposition *ci*:

²⁹ It is also possible to use the locative *fi*-class:

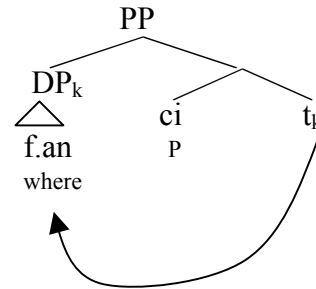
- (i) (ci) f.u ñu teg tééré bi
 P cl.u 3pl put book the
 “at where did they put the book?”

(131) *an*-forms inside of PPs

a. structure for (130)a



b. structure for (130)b



If an *an*-form can raise to SpecPP, this gives a reason for thinking that the silent *wh* can do the same. The alternations in (130) are not possible with non-*wh* words:

(132) a. *_[PP taabal ci] l-a-ñu teg tééré bi
 table P xpl-*a*-3pl put book the
 “it’s on a table that they put the book”

b. _[PP ci taabal] l-a-ñu teg tééré bi
 P table xpl-*a*-3pl put book the
 “it’s on a table that they put the book”

PP pied piping is impossible with relative clauses:

(133) gis-na-a (*ci) l.u ñu teg tééré bi
 see-*na*-1sg P cl.*u* 3pl put book the
 “I saw something on which they put the book”

PP pied piping is possible from an embedded clause. The *u*-form can be repeated, but the preposition cannot be:

(134) ci l.u a foog (*ci) l.u ñu teg tééré bi
 P cl.*u* 2sg think P cl.*u* 3pl put book the
 “at what do you think they put the book?”³⁰

It is possible to repeat the preposition if the PP is extracted from a cleft:

³⁰ The *fi*-class locatives show the same pattern:
 (i) ci f.u a foog (*ci) f.u ñu teg tééré bi
 P cl.*u* 2sg think P cl.*u* 3pl put book the
 “at where do you think they put the book?”

- (135) **ci l.u** ñu foog **ci** l-a-a teg tééré bi
 P cl.u 3pl think P xpl-a-1sg put book the
 “at what do they think I put the book?”

Adjunct locative PPs cannot be used in the PP pied piping construction. The preposition must be suppressed and the locative suffix *-e* appears on the verb obligatorily:

- (136) a. (***ci**) **f.u** xale yi di fo-we *u-form in PP
 P cl.u child the di play-loc
 “where are the children playing?”

If an *an*-form is used, the preposition is optional:

- (137) (ci) **f.an** l-a xale yi di fo-we *an*-form in PP
 P cl.an xpl-a child the di play-loc
 “(at) where are the children playing?”

Appendix 3 *Sluicing*

The *u*-forms cannot be sluiced, while the *an*-forms can be:

- (138) a. *kenn ñëw-në, wànte xam-u-ma **k.u** *u*-form
 someone arrive-na but know-neg-1sg cl.u
 “someone arrived, but I don't know who”
 b. kenn ñëw-në, wànte xam-u-ma **k-an** *an*-form
 someone arrive-na but know-neg-1sg cl-an
 “someone arrived, but I don't know who”

While the *u*-forms cannot be sluiced in the same way that the *an*-forms can be, they are able to participate in a pseudosluice-like construction (Merchant 2001):

- (139) someone just left, but I don't know who ~~it was~~ pseudosluice

A pseudosluice then is a sluice-like construction, but one where the elided material contains a copula:

- (140) a. kenn ñëw-në, wànte xam-u-ma **k.u mu (di)**
 someone arrive-na but know-neg-1sg cl.u 3sg *di*
 “someone arrived, but I don't know who-he”
 b. *kenn ñëw-në, wànte xam-u-ma **k.u mu-y**
 someone arrive-na but know-neg-1sg cl.u 3sg-*di*
 “someone arrived, but I don't know who-he”

c. *kenn ñëw-në, wànte xam-u-ma **k.u y**
 someone arrive-*na* but know-neg-1sg cl.u *di*
 “someone arrived, but I don't know who it was”

The optional *di* in (140)a above (cf. Chapter 4 of the present work) indicates that it is not an actual sluice, but a type of reduced copular clause. The reduced form of *di*, the clitic *y*, cannot be used in cases like (140)a, as (140)b and c attest. In addition, the subject pronoun must be present, as seen by contrasting (138)a and (140)c with (140)a above.

That (140)a is related to a species of cleft is supported by sentences like (141)a and b, which may be used to ask copular questions. The form *mu* is the 3sg subject pronoun found in relative clauses:

(141) a. k.u mu di?	b. k.u mu-(*y)
cl.u 3sg <i>di</i>	cl.u 3sg- <i>di</i>
“who is he?”	“who is he?”

(Note that (141)a and b would be answered most naturally by (142):

(142) Gällaay-a
 gällaay-a
 “it's Gällaay”

A *cl.u y* string is ungrammatical as a sluice, as seen in (140)c, but grammatical as a copular question ((143)a). At the same time, the grammatically sluiced (140)a is ungrammatical as an independent question (with subject and predicate overt):

(143) a. k.u y Gällaay?	cf. (140)c
cl.u <i>di</i> gällaay	
“who is Gällaay?”	
b. * k.u mu di Gällaay	cf. (140)a
cl.u 3sg <i>di</i> gällaay	
“who is Gällaay?”	

Pseudosluices cannot be coordinated either, with the appropriate meaning:

(144) **k.u mu** te **l.u mu** dàq ca lekkool ba
 cl.u 3sg and cl.u 3sg chase P school the
 “who is he and what did he chase at school?”
 *”who and what did he chase at school?”

(144) has the interpretation of two conjoined clauses, not that of an RNR conjunction.