

The Tigrinya *zə*- prefix: A Morphological Reflex of Successive-Cyclic Movement

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Workshop on Prefixes vs Suffixes in Afroasiatic

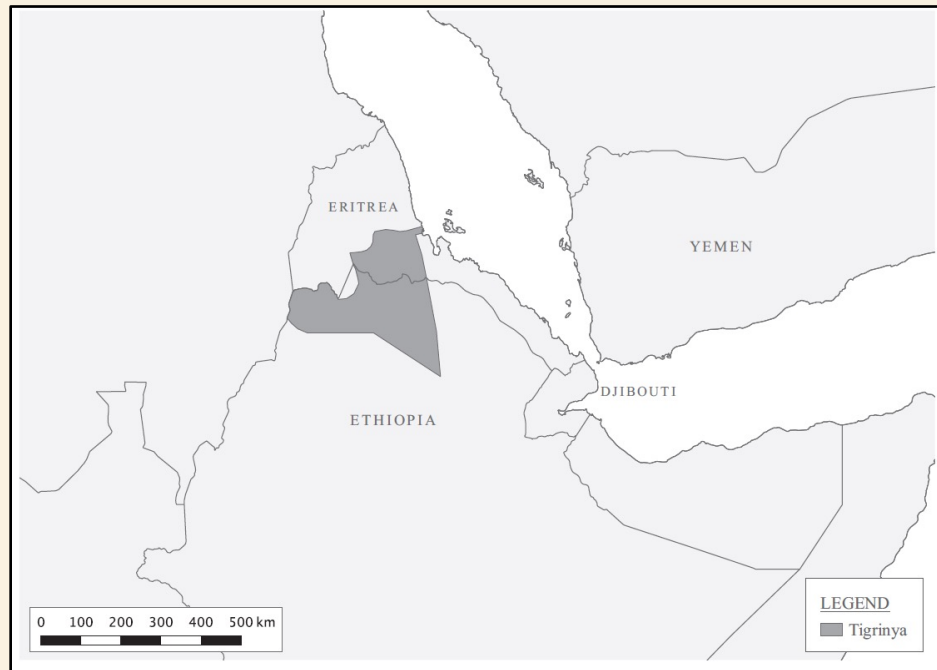
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Tigrinya



From Bulakh 2019

It is an Ethio-Semitic language spoken mainly in central **Eritrea** and northern **Ethiopia**.

Its clausal and nominal systems are **head-final**.

In Linguistics, “the Ethio Semitic language group has been largely neglected in both descriptive and theoretical studies” and Tigrinya seems to be in fact a “**lesser-studied Semitic language**” (Gebregziabher 2013).

Data was gathered in a **field work** carried out in Geneva with four native speakers of Tigrinya born and raised in **Eritrea**.

What I am presenting today is a first investigation for my dissertation that I would like to continue to develop in the following years.

Setting the Scene

Tigrinya shows standard Semitic morphology.

e.g. Semitic Verb system

Prefixal Conjugation (PC)

Suffixal Conjugation (SC)

+ New Suffixal Conjugation (NSC) from Cushitic influence (Appleyard 2015)

It has replaced the SC in affirmative declarative clauses to express perfective actions (Bulakh 2019).

--> SC is used when prefixes (e.g. negation and cf. next slide) appear on the verb.

gəbərə (do)			
	PC	SC	NSC
1s	jə-gəbbər	gəbər-ku	gəir-ε
2sm	tə-gəbbər	gəbər-ka	gəir-ka
2sf	tə-gəbr-i	gəbər-ki	gəir-ki
3sm	jə-gəbbər	gəbər-ε	gəir-u
3sf	tə-gəbbər	gəbər-εt	gəir-a
1p	nə-gəbbər	gəbər-na	gəir-na
2pm	tə-gəbr-u	gəbər-kum	gəir-kum
2pf	tə-gəbr-a	gəbər-kən	gəir-kən
3pm	jə-gəbr-u	gəbər-u	gəir-om
3pf	jə-gəbr-a	gəbər-a	gəir-ən

Setting the Scene

Tigrinya shows standard Semitic morphology.

e.g. **Prefixes**

(cf. future tense *sa-*, definite article *ʔal-*, preposition *li-* in Standard Arabic, ...)

- *b-* as in (1)

- *n-* as in (2)

- ...

(1)

ʔita finistra *(b-ətom səɾɛβʼti) təsɛyra
DEM.3fs window.fs PREP-DEM.3mp thieves.mp break.PASS.3fs

‘The window was broken by the thieves.’

(2)

Tesfay (n)-əti səbʔay qɛtil-wo
Tesfay.ms (ACC)-DEM.ms man.ms kill.NSC.3ms-3ms

‘Tesfay killed the man.’

Setting the Scene

Tigrinya shows a standard Semitic morphology.

e.g. **Prefixes & Subordination**

- *kə-* as in (3)

- *kəmzi-* as in (4)

- *zə-* as in (5)

(3) Səgen ʕeyo gəza **kə**-təsərəh nɛyr-wa

Segen.fs homework.ms *kə*-work.PC.3fs COP.PAST.3fs-CM.3FS

‘Segen had to do her homework.’

(4) ?ane **kəmzi**-məsl-əni nsxa nfuʕə ɪxa

1s *kəmzə*-think.PC.1s-POSS.1s 2ms smart COP.PAST.2ms

‘I think that you are smart.’

(5) ?ita nsxa **zə**-habka-ni məʃhaf ?atfi?ə-ja

DEM.3fs 2ms *zə*-give.SC.2MS-POSS.1s book.fs give.NSC.1s-2fs

‘I lost the book that you gave me.’

Morphology & Word order

When looking at the **morphology** of a language, we must take into consideration **word order**.

My assumption is that **head-finality** is derived from a head-initial structure in which elements have undergone leftward movement from their argument positions to higher functional projections.

In other words, I take an **LCA approach to head-finality** (Kayne 1994).

Linear Correspondence Axiom: $d(A)$ is a linear ordering of T
 d = non-terminal-to-terminal dominance
 A = set of (x_i, y_i) with x_i c-commands y_i
 T = set of terminals

Morphology & Word order

*“Languages all have Specifier-Head-Complement order...
[languages] in which some complement precedes the associated head
must necessarily have **moved that complement leftward** past the head in some specifier position...
if UG unfailingly imposes S-H-C order, **there cannot be any directionality parameter**
in the standard sense of the term.” (Kayne 1994: 47)*

I propose that what have traditionally been called **prefixes** in head-final languages do not have an intrinsic “prefixal morphological property”, but **they are elements that undergo specific syntactic constraints that result in them appearing in front of verbs.**

Research Question I

How does the “prefixal system” in Tigrinya work?
What exactly are the syntactic mechanisms that trigger the movement of constituents resulting in prefixes occurring on the left of verbs?

BUT!

Before trying to answer this question, I need to start from the basis and build a syntactic structure to derive the correct word order of declarative clauses in Tigrinya.

So, let's put prefixes aside for just a moment.

Declarative clauses in Tigrinya

S

O

V

(6) ?anɛ kulu gəzie məs dəm-ay jətsawɛt (ʔijɛ)
1s all.ms time.ms with cat.ms-POSS.1s play.PC.1s COP.PRES.1s
'I always play with my cat.'

Habitual Present

S

O

V

Aux

(7) ?anɛ hədʒi məs dəm-ay jətsawɛt ʔallɛxu
1s now with cat.ms-POSS.1s play.PC.1s AUX.PRES.1s
'I am playing with my cat now.'

Present Progressive

Deriving the SOVAux order

Declarative clauses in Tigrinya

LCA approach to head-finality

(Kayne 1994)

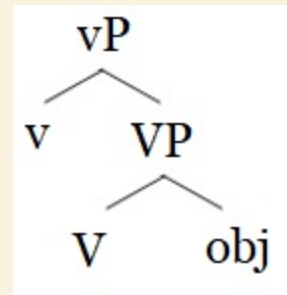
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Cartographic Framework

(Rizzi 1997, Cinque 1999, a.o.)

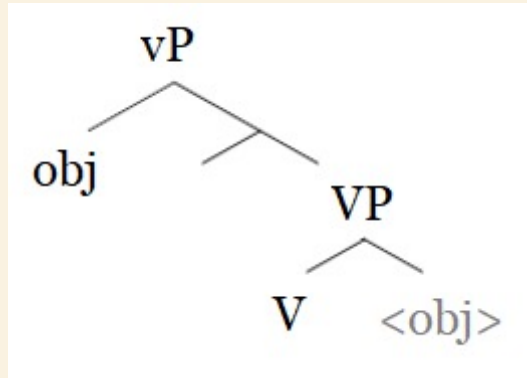
Deriving the SOVAux order

Declarative clauses in Tigrinya



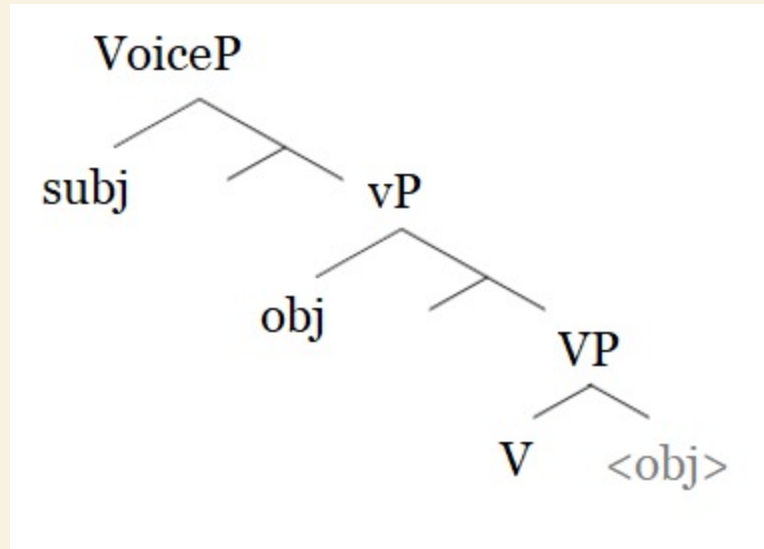
Deriving the SOVAux order

Declarative clauses in Tigrinya



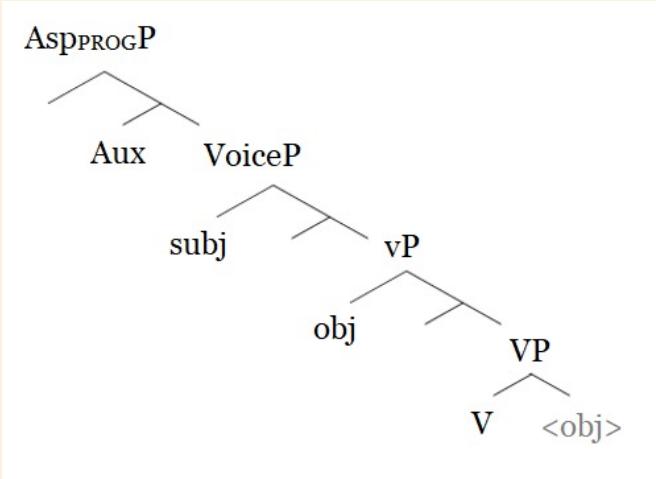
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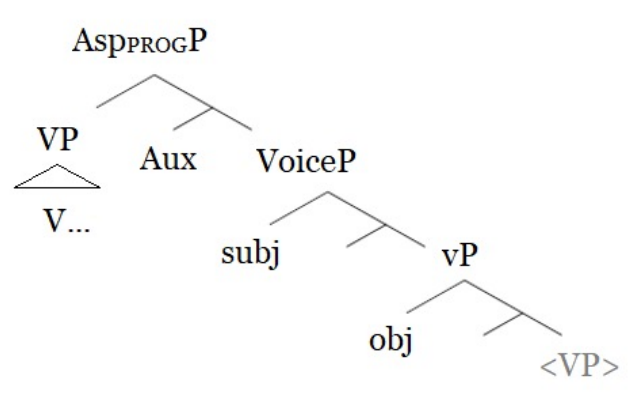
Legate 2014

Deriving the SOVAux order

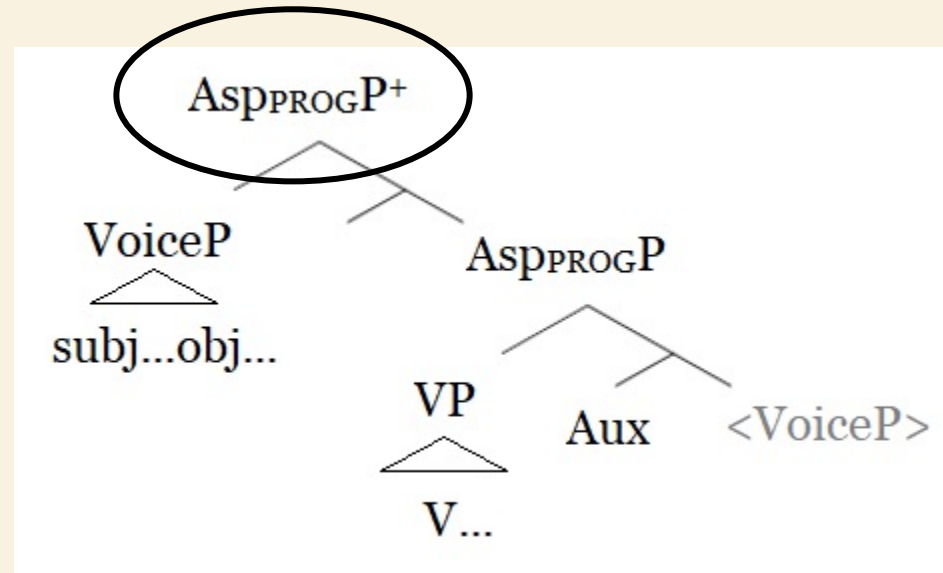


Cinque 1999

Deriving the SOVAux order

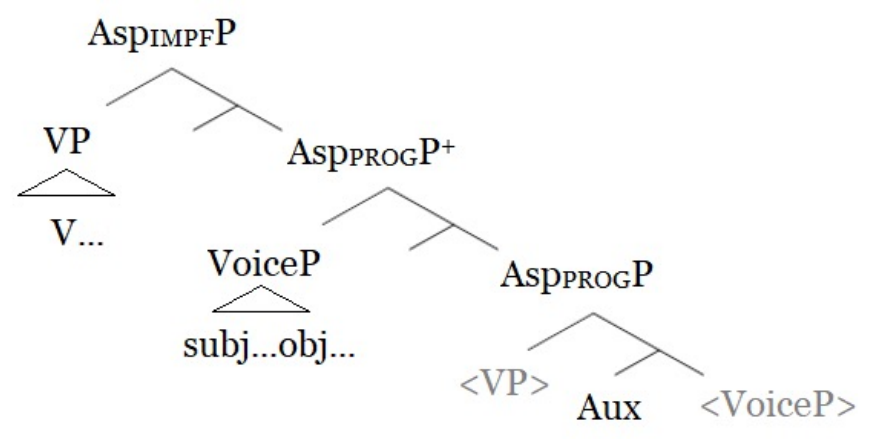


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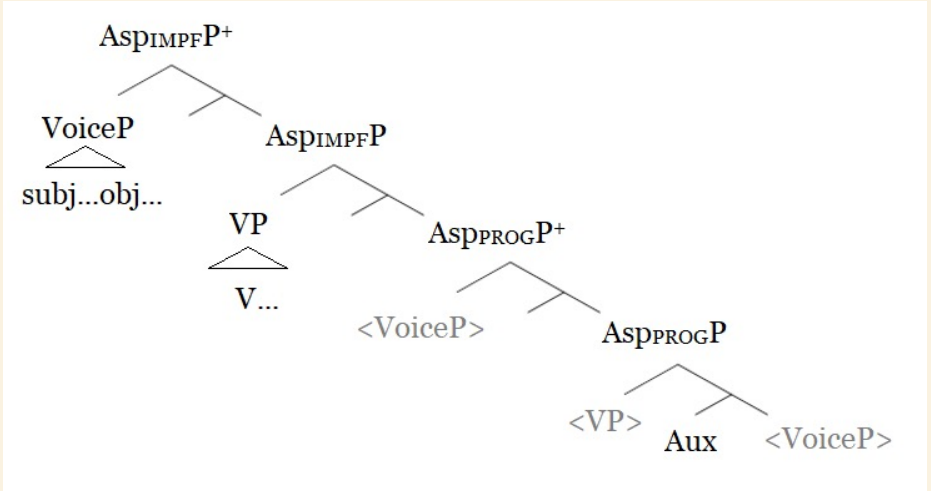


Koopman & Szabolsci 2000, Harwood 2014

Deriving the SOVAux order

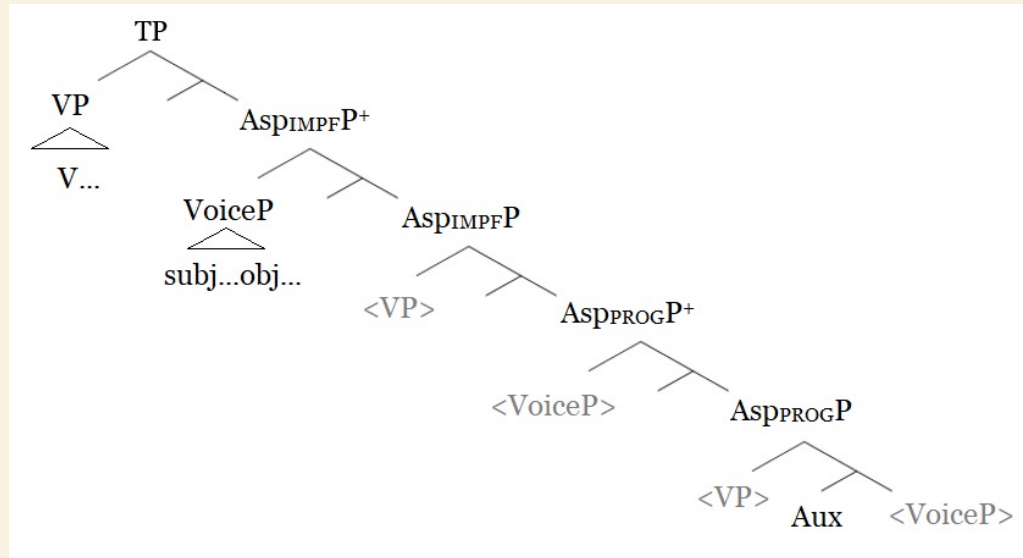


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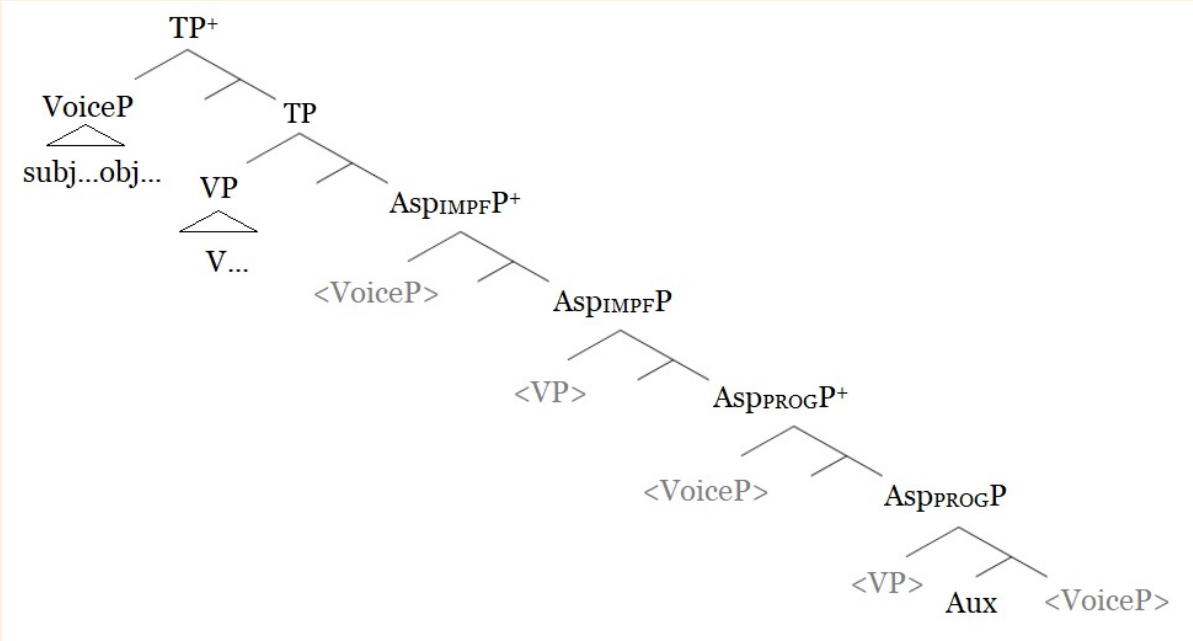


Deriving the SOVAux order

Declarative clauses in Tigrinya



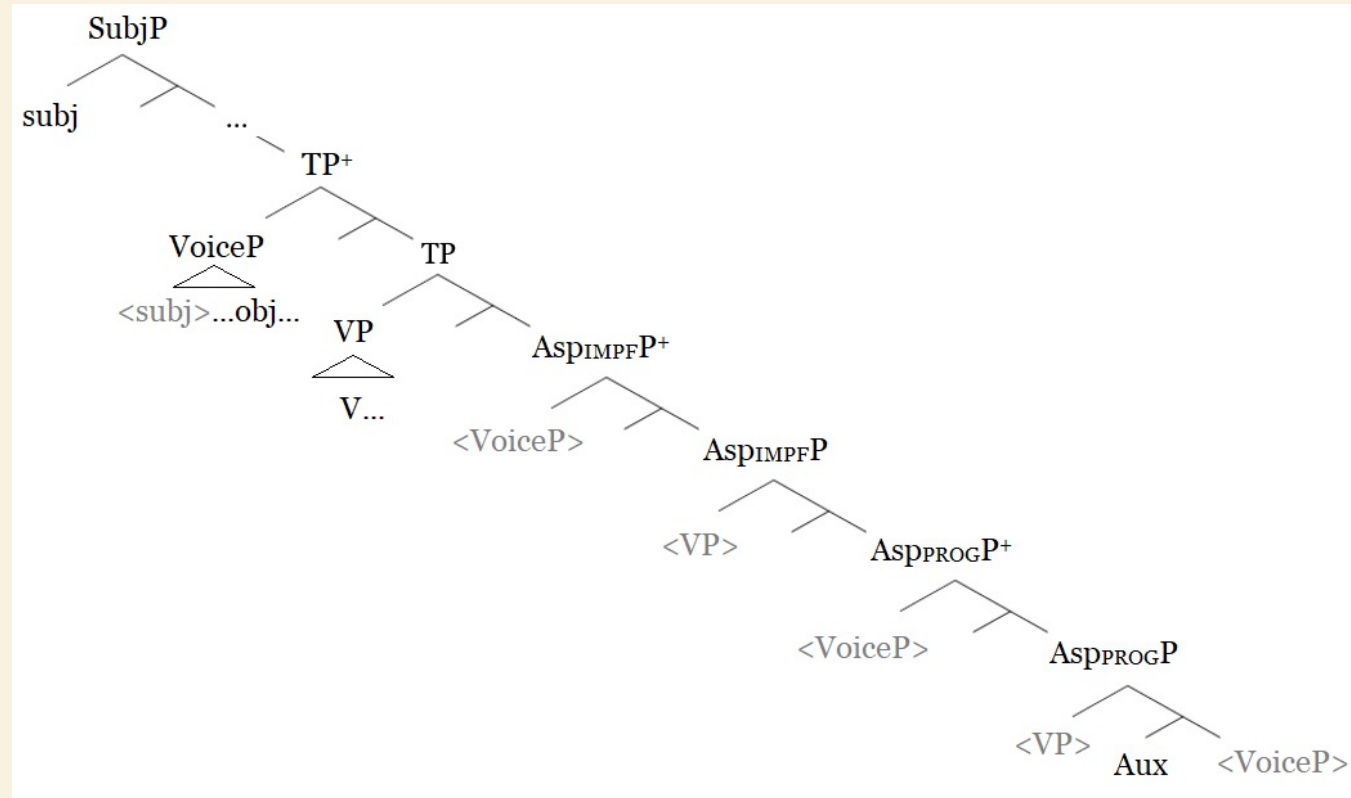
Deriving the SOVAux order



Deriving the SOVAux order

Declarative clauses in Tigrinya

Cardinaletti 2004



S

O

V

Aux

NB: To obtain the SOV order, erase the “AspPROGP layer”.

Setting the Scene

Tigrinya shows a standard Semitic morphology.

e.g. **Prefixes & Subordination**

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- *kəmzi-* as in (4)

- *zə-* as in (5)

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Segen.fs homework.ms *kə*-work.PC.3fs COP.PAST.3fs-CM.3FS

‘Segen had to do her homework.’

(4) ?ane **kəmzi**-məsl-əni nsxa nfuʕə ixa

1s *kəmzə*-think.PC.1s-POSS.1s 2ms smart COP.PAST.2ms

‘I think that you are smart.’

(5) ?ita nsxa **zə**-habka-ni məʃhaf ?atfi?ə-ja

DEM.3fs 2ms *zə*-give.NSC.2MS-POSS.1s book.fs give.NSC.1s-2fs

‘I lost the book that you gave me.’

Relative clauses

Setting the Scene

Relative clauses in Tigrinya

zə- V

(8) [ʔitom ʔanɛ zɛ-nbeb-om mətʃafti] ʔazenagaʕi ʔijom

DEM.mp 1s zə-read.PC.1s-3mp book.mp amusing COP.PRES.3mp

‘The books that I read are amusing.’ (Lit.: ‘The that-I-read-books amusing are.’)

Habitual Present

zə- V

zə- Aux

(9) [ʔiti ʔanɛ zɛ-nbeb-o zɛ-llɛxu mətʃaf] ʔazenagaʕi ʔiju

DEM.ms 1s zə-read.PC.1s-3ms zə-AUX.PRES.1s book.ms amusing COP.PRES.3ms

‘The book that I am reading is amusing.’ (Lit.: ‘The that-I-am-reading book amusing is.’)

Present Progressive

RCs are most commonly prenominal.

Research Question II

What is **zə-** ?

“relative marker”

Conti Rossini 1940

Leslau 1941

Mason 1996

Kogan 1997

Bulakh 2019

“particle”

Palmer 1962

Kifle 2011

Gebregziabher 2012

“relative complementizer/operator”

Tajebe 2003

Overfelt 2009

My proposal:

**“morphological reflex
of
successive-cyclic
movement”**

The zə- prefix

It has probably developed etymologically from demonstrative roots (Dillman 1974), such as the demonstrative masculine singular accusative *zə-* in Ge'ez (Butts 2019).

It is the outermost prefix in the verb stem: it precedes all inflectional (10), derivational (11) and clausal (12) prefixes (Kifle 2010).

(10)

ʔiti Tekle **zə**-səti-jo **zɛ**-llo may Təsum ʔiju
 DEM.ms Tekle.ms ZƏ-drink.PC.3ms-3ms ZƏ-AUX.PRES.3ms water.ms delicious COP.3ms
 ‘The water that Tekle is drinking is good.’

(11)

ʔiti b-Tekle **zə**-tə-sətejɛ may Təsum ʔiju
 DEM.ms PREP-Tekle.ms ZƏ-PASS.drink.SC.3ms water.ms delicious COP.3ms
 ‘The water that was drunk by Tekle is good.’

(12)

ʔiti ʃəkolata **zɛ**-y-bɛlf wɛdi Solomon jəbhal
 DEM.ms chocolate.fs zə-NEG-eat.PC.3ms boy.ms Solomon.ms call.IMPF.3ms
 ‘The boy who does not eat chocolate is called Solomon.’

The zə- prefix

This prefix can change depending on the first phoneme of the verb to which it is attached:

in front of [ʔ] → zɛ-

in front of [t] (2s, 3fs) → ʔə- (Leslau 1941, Mason 1996, Kifle 2010)

[n] (1p) → ʔə- (Leslau 1941, Mason 1996, Kifle 2010)

BUT all my consultants: → ø

(13)

ʔiti	nsxa	təsɛti-jo	zɛ-llɛxa	may	Təʕum	ʔiju
DEM.ms	2ms	drink.PC.2ms-3ms	ZƏ-AUX.PRES.2ms	water.ms	delicious	COP.3ms

‘The water that you are drinking is good.’

(14)

ʔiti	nəhna	nəsɛti-jo	zɛ-llɛna	may	Təʕum	ʔiju
DEM.ms	1p	drink.PC.1p-3ms	ZƏ-AUX.PRES.1P	water.ms	delicious	COP.3ms

‘The water that we are drinking is good.’

The zə- prefix is present in all types of relative clauses.

(15) SUBJECT RCS

ʔiti ʃəkɔlata zə-bɛɫʃ zɛ-lo wɛdi
 DEM.ms chocolate.fs zə-eat.IMPF.3ms zə-AUX.PRES.3ms boy.ms
 Hagos ʃəbhal
 Hagos.ms. call.IMPF.3ms
 ‘The boy who is eating chocolate is called Hagos.’

(16) INDIRECT OBJECT RCS

ʔiti wɛdi n-əza Tərəmuz zə-həb-o
 DEM.ms boy.ms CM-DEM.mf bottle.fs zə-give.IMPF.1s-OM.ms
 zɛ-lɛxu] ɥaw-a nRuth iju
 zə-AUX.PRES.3ms brother.ms-POSS-3fs CM-Ruth.fs COP.PRES.3ms
 ‘The boy to whom I am giving this bottle is Ruth’s brother.’

(17) FREE RCS

ʔəntay kəmzi-gaTɛmɛ zə-fɛləT səb jɛlen
 what kəmzi-happen.PERF.3ms zə-know.IMPF.3ms nobody
 ‘Nobody knows what happened.’

(18) AMOUNT/MAXIMALIZING RCS

n-əta zə-wɛdɛqa-ya wɛini kə-sɛti
 CM-DEM.fs zə-drop.PERF.2ms-OM.fs wine.fs kə-drink.IMPF.1s
 mə-dɛɛxu
 mə-want.PERF.1s
 ‘I would like to drink the wine that you dropped on the floor.’

(19) NON-RESTRICTIVE RCS

Tɛsfay ʔab salsai dərbi zə-qmɛt kab ʔərtra
 Tɛsfay.ms PREP third floor.ms zə-live.IMPF.3ms PREP Eritrea
 mɛtsiʔu
 come.PERF.3ms
 ‘Tɛsfay, who lives on the third floor, comes from Eritrea.’

My proposal

I propose that

Z ∂ - is

a morphological reflex of successive-cyclic movement of the relativized nominal Head

(McCloskey 2002, Müller 2011, Van Urk 2015, Georgi 2017, a.o.)

that raises from its argument position to an A-bar position in the left periphery.

My proposal

In **Relative Clauses**, the relativized noun Head raises from its argument position to the CP domain to check its [*wh*] (or [*Rel*]) feature. This movement is therefore an instance of *wh*-movement that should be **local** and should take place in successive stages or cycles (Chomsky 1977).

I implement the derivation of relative clauses in Tigrinya in the following way:

I take **zə-** to be generated in the head of a projection that I call **zəP**;

I claim that there are **two zəP projections** in the structure, $zəP_1$ and $zəP_2$, merged between the two aspectual projections and their respective XP^+ projections.

When **zə-** is merged, it **triggers the movement of the relativized Head**, which raises to $Spec, zəP$.

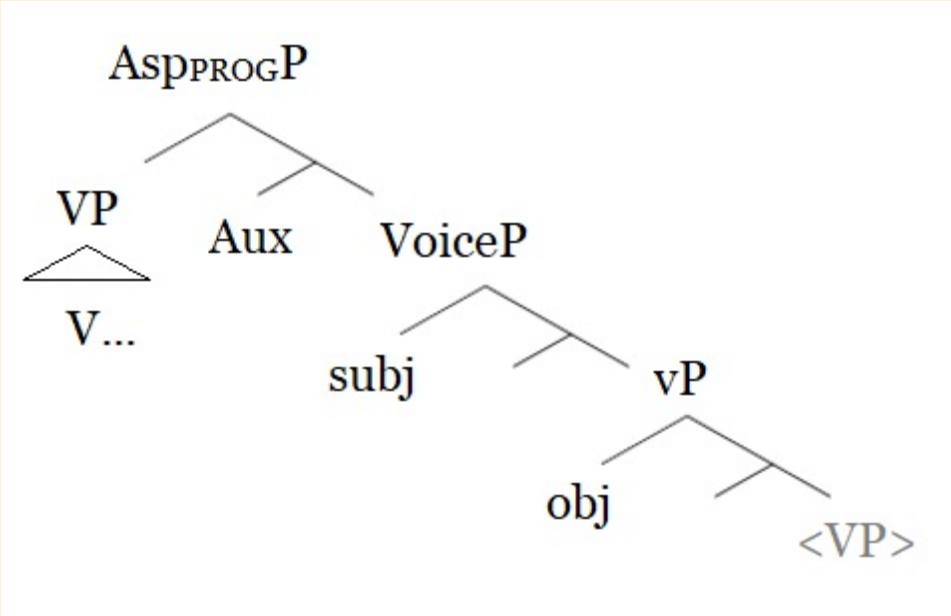
Deriving Object Relative Clauses

S zə-V zə-Aux O

(9) [ʔiti ʔanɛ zɛ-nbeb-o zɛ-llexu mɛtʃaf] ʔazenagaʃi ʔiju
DEM.ms 1s zə-read.PC.1s-3ms zə-AUX.PRES.1s book.ms amusing COP.PRES.3ms
'The book that I am reading is amusing.' (Lit.: 'The that-I-am-reading book amusing is.')

Deriving Object Relative Clauses

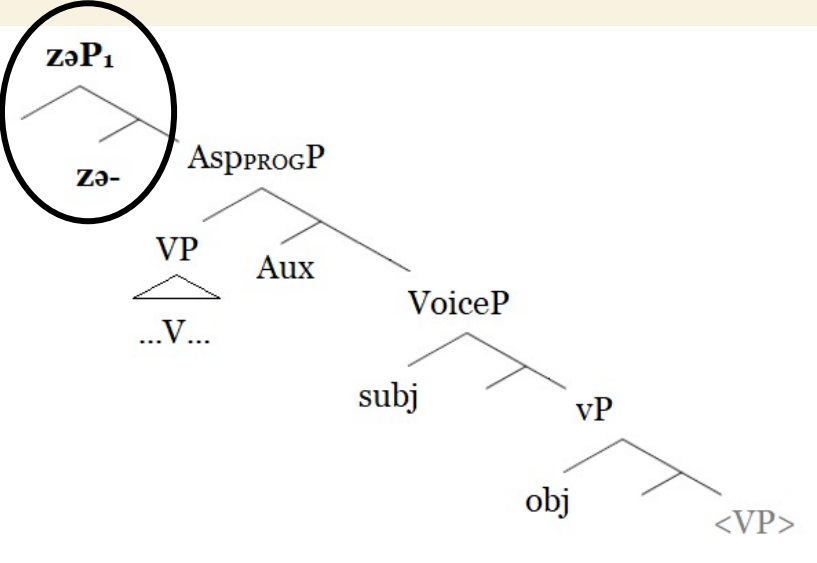
S zə-V zə-Aux O



(same steps as in declarative clauses)

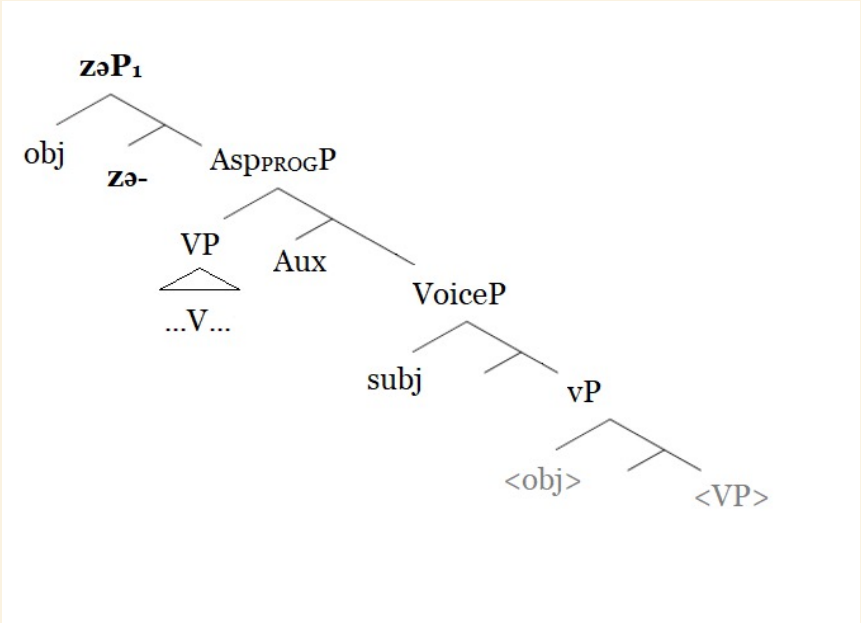
Deriving Object Relative Clauses

S zə-V zə-Aux O



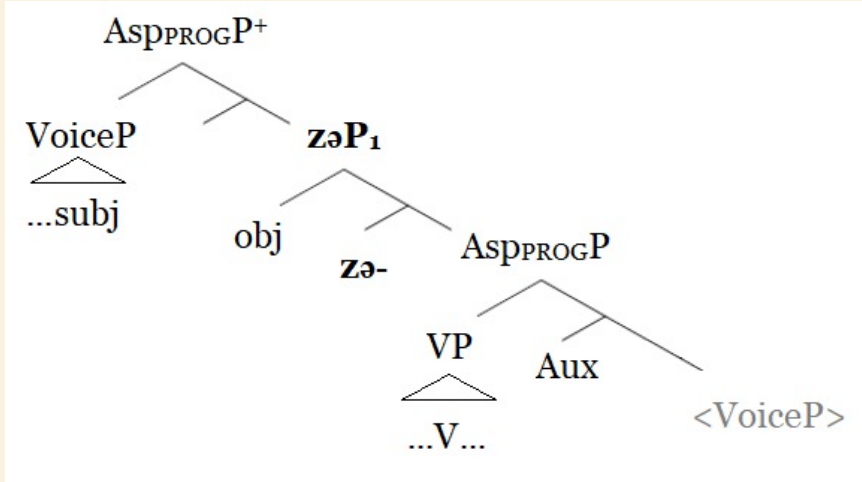
Deriving Object Relative Clauses

S zə-V zə-Aux O



Deriving Object Relative Clauses

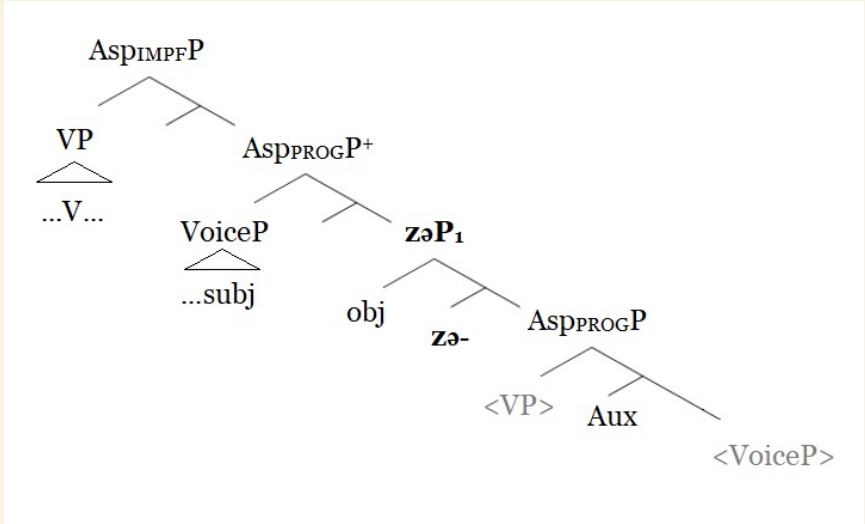
S zə-V zə-Aux O



(same step as in declarative clauses)

Deriving Object Relative Clauses

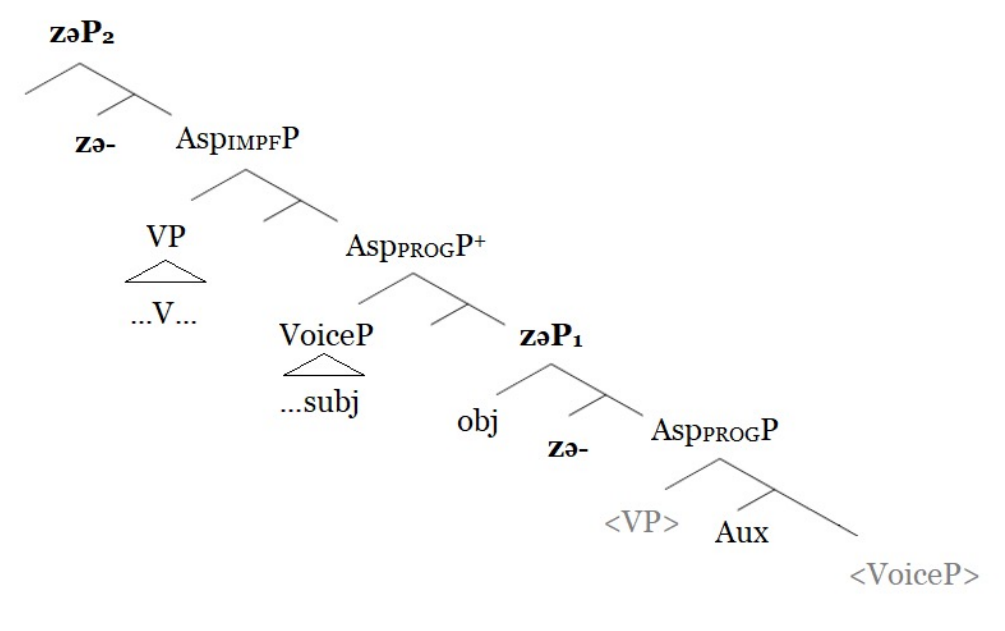
S zə-V zə-Aux O



(same step as in declarative clauses)

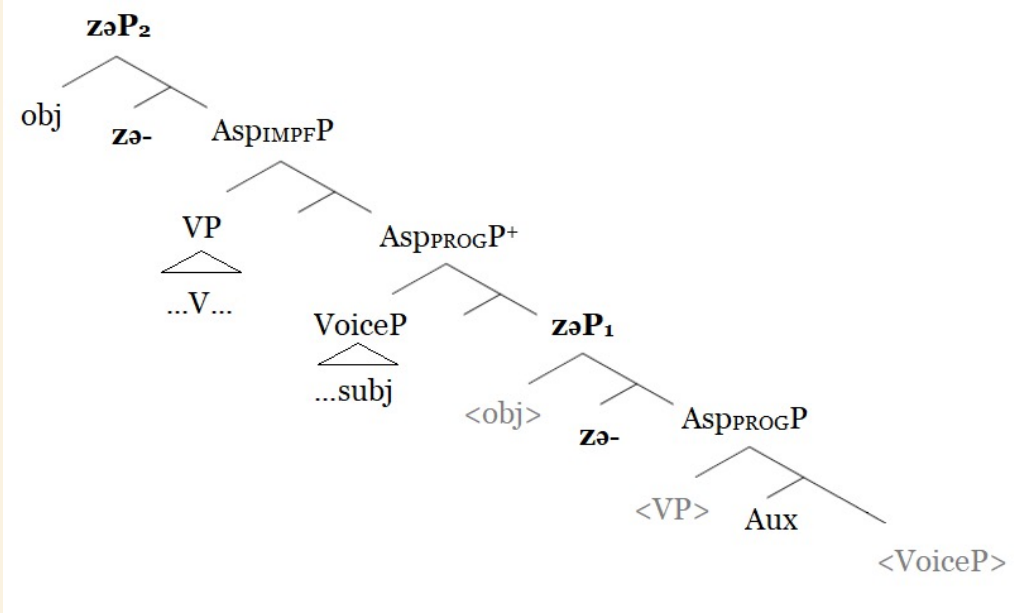
Deriving Object Relative Clauses

S zə-V zə-Aux O



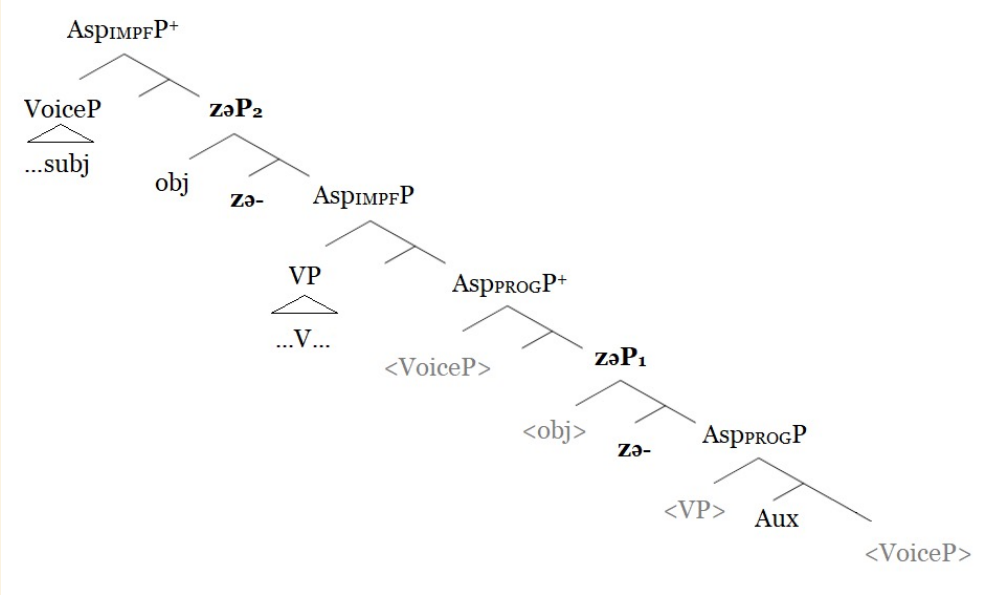
Deriving Object Relative Clauses

S zə-V zə-Aux O



Deriving Object Relative Clauses

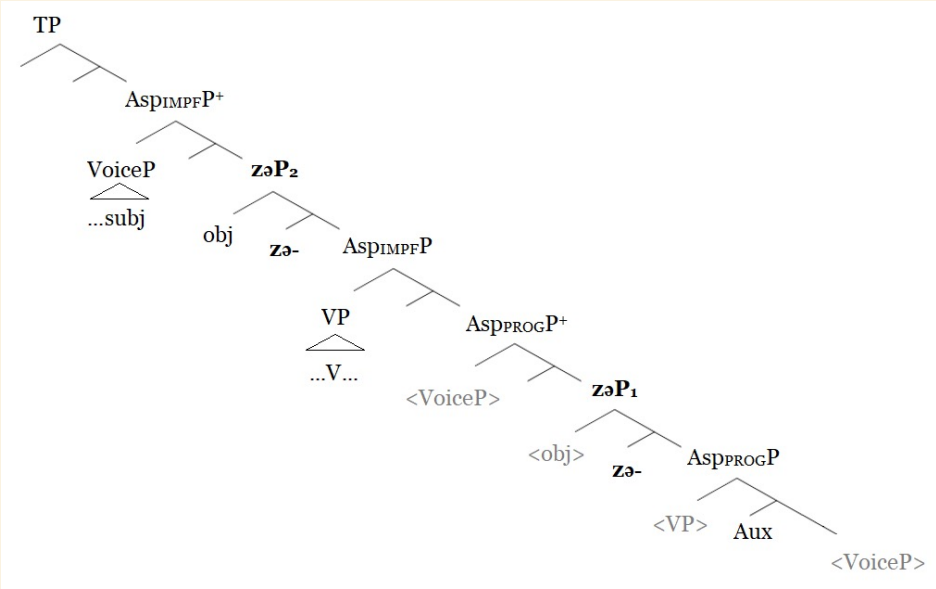
S zə-V zə-Aux O



(same step as in declarative clauses)

Deriving Object Relative Clauses

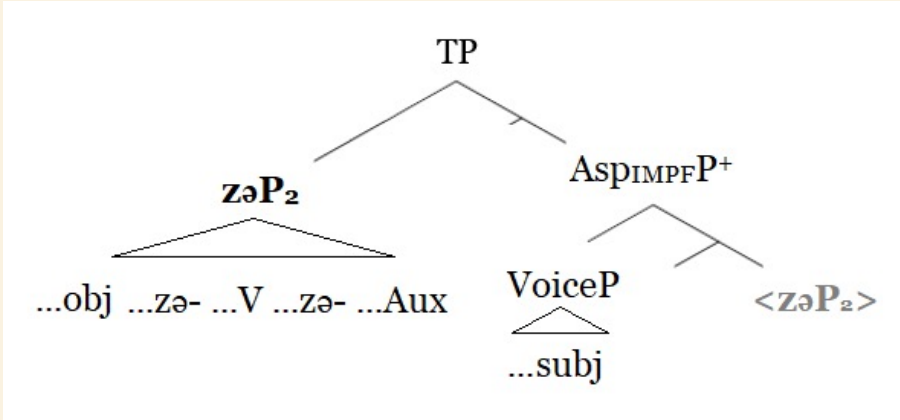
S zə-V zə-Aux O



(same step as in declarative clauses)

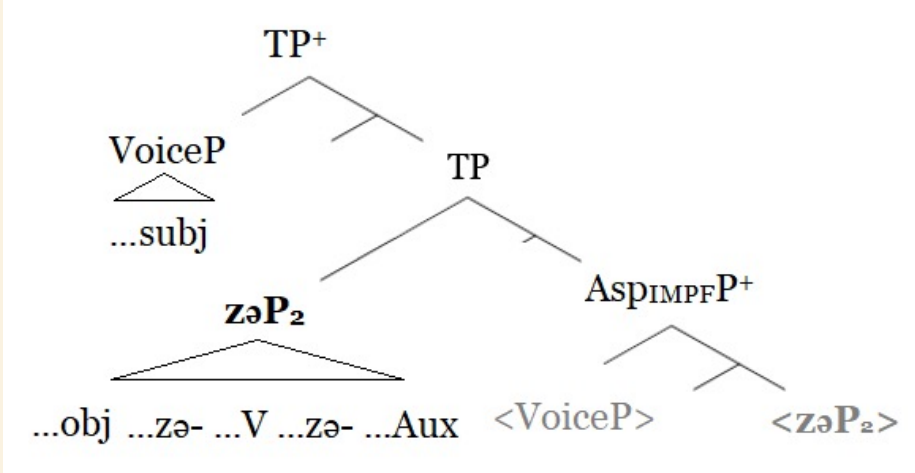
Deriving Object Relative Clauses

S zə-V zə-Aux O



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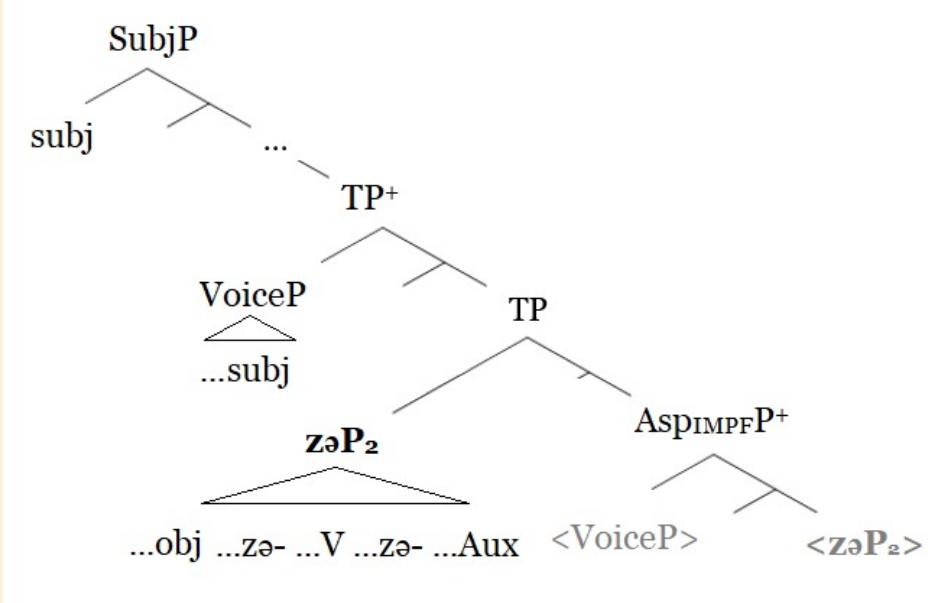
S zə-V zə-Aux O



(same step as in declarative clauses)

Deriving Object Relative Clauses

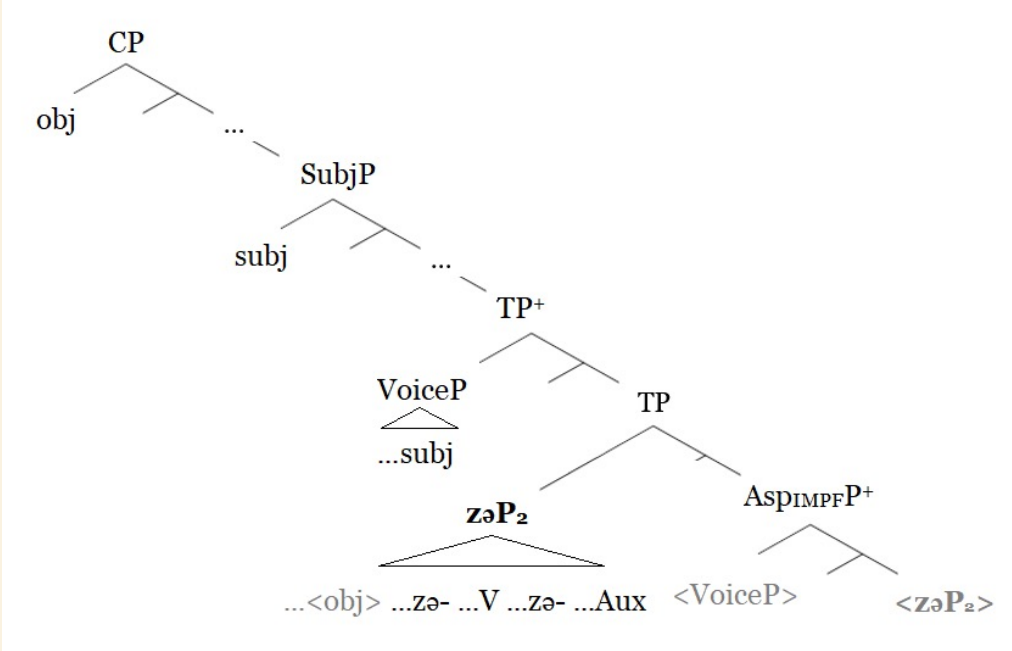
S zə-V zə-Aux O



(same step as in declarative clauses)

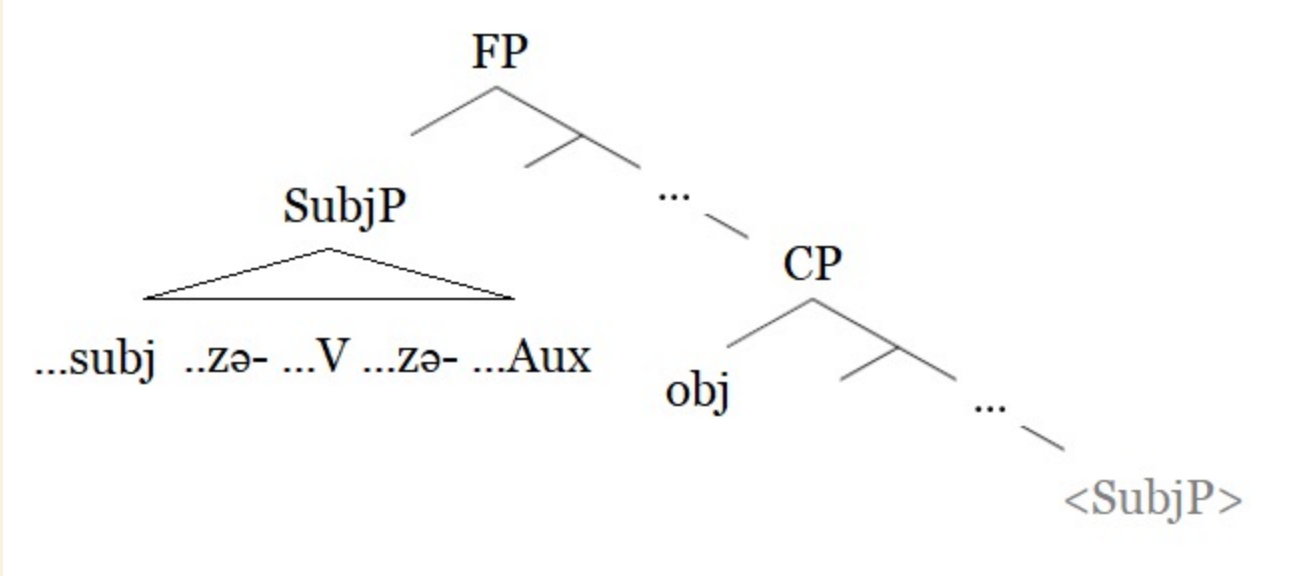
Deriving Object Relative Clauses

S zə-V zə-Aux O



Deriving Object Relative Clauses

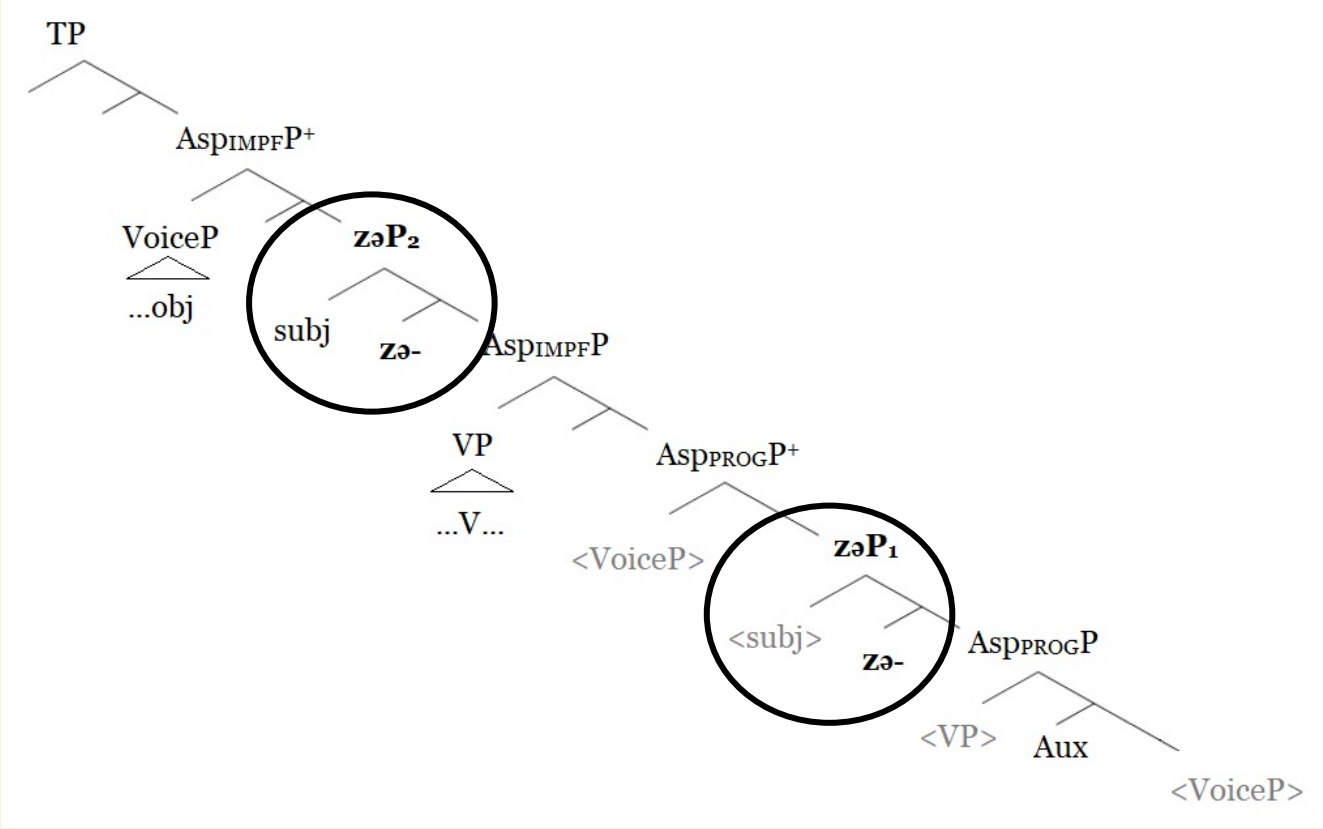
S zə-V zə-Aux O



S **zə-** **V** **zə-** **Aux** **O**

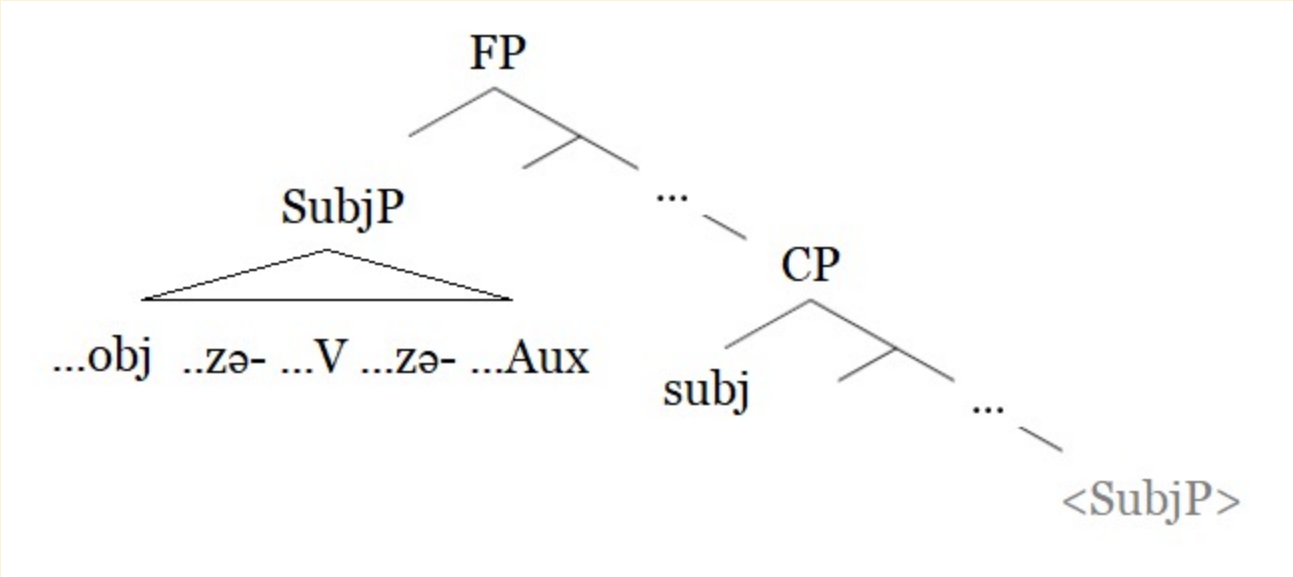
Deriving Subject Relative Clauses

O zə-V zə-Aux S



Deriving Subject Relative Clauses

O zə-V zə-Aux S



O **zə-** **V** **zə-** **Aux** **S**

Plot Twist!

Interestingly, *zə-* does not only occur in relative clauses, but also in

COMPARATIVES, as in (24),

&

RAISING CONSTRUCTIONS, as in (25).

These examples support the analysis of *zə-* as a reflex of successive-cyclic movement in which the prefix attracts the constituent that has been extracted and undergoes A'- (24) **and** A- (25) **movement**.

The phenomenon also implies that the *wh*-movement in comparatives (Chomsky 1977) and the A-movement of the NP in raising constructions take place in very local steps.

(24)

Tesfay kab-ti ?anɛ zə-ħasəbɛxu-wo yəʕabi

Tesfay.ms PREP-DEM.ms 1S zə-think.PERF.1S-3ms 'be tall'.IMPF.3ms

“Tesfay is taller than I thought.” (Lit.: “Tesfay than what I thought is taller.”)

(25)

Kidane ?iti məʃħaf zɛ-nbeb-o zɛ-llo

Kidane.ms DEM.ms book.ms zə-read.PERF.1S-3ms zə-AUX.PRES.3ms

jəmɛsl

seem.IMPF.3ms

“Kidane seems to be reading the book.”

Analysis beyond zə-

The logic behind the analysis just presented could be taken to derive other prefixes.

(This will not be further investigated in this talk.)

(23)

ʔanɛ **kə**-bɛlʃə **kɛ**-lɛxu nsu rəʔəyu-ni

1s kə-eat.PC.1s kə-AUX.PRES.1s 3ms see.NSC.3ms-1s

“While I was eating, he saw me.”

Conclusions

Any treatment of **zə-** as inherently related to relative clauses (e.g., Leslau 1941, Overfelt 2009, a.o.) would miss the generalization that it occurs in other A' constructions, namely comparatives and raising constructions.

The analysis of **zə-** as a reflex of successive-cyclic movement suggests:

That *wh*, A and A-bar movements must be more **local** than what has been proposed in standard phase theory (Chomsky 2000, 2001, 2004, 2008).

That the notion of **cyclicity** and the nature of **phases** must be further developed.

The LCA approach to head-finality taken to derive declarative and relative clauses in Tigrinya offers a novel way of looking at head-final languages and provides a new perspective on the treatment of Semitic prefixes.

But there is still a long way to go... wish me luck! ☺

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Thank you!