

Linear order as a basic morphosyntactic factor in Non-Khoe Khoisan

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1. Introduction

- Non-Khoe - subgroup of Southern African Khoisan, three lineages: **Figure 1, Map**

Figure 1: Constituency of Non-Khoe († = extinct, DC = dialect cluster)

1. **Ju** (= Northern Khoisan, DC)

Northwest !'O!Xũu, !Xũu

Southeast Ju!hoan, †Kx'ao||'ãe

2. **†Hõa** (undetermined isolate, promising evidence for genealogical link to Ju)

3. **Tuu** (= Southern Khoisan)

Taa West !Xõo, East !Xõo, Kakia†, ... (DC); !'Auni†, |Haasi† (DC)

!Ui |Xam† (DC); N||ng (DC); †Ungkue†; ||Xegwi†

- homogeneity of basic morphosyntactic structure, inter alia:

- a) SVO clause order, head-initial noun phrase except head-final nominal attribution
 - b) little morphology; importance of constituent order, particles, analytical constructions
 - c) verb serialization
 - d) special type of relational gram as a default marker of valence-external participants
 - e) complex + irregular number marking in nominals and predicates, i.a. stem suppletion
 - f) uncommon type of gender system
 - g) inclusive/exclusive distinction in pronominal system
- > Non-Khoe is a distinctive "typological entity", historical significance unclear

2. Clause structure and grammatical relations

- basic clause syntax (n = possible multiple occurrence) > 3 grammatical relations:

[SUBJECT - PREDICATION.OPERATOR_n - VERB_n - OBJECT - PREPOSITION+ADJUNCT_n]

- virtually all verbs with maximal valence of one non-subject participant

- default preposition = "multipurpose oblique marker (MPO)" for all or most postverbal participants outside the valence of the verb

> semantically very broad: most semantic roles except those typically expressed by subjects (agent, experiencer, force) and animate objects (patient, recipient); hence patients, all kinds of obliques and adverbials

2.1. Comparative data

2.1.a. !Ui branch of Tuu

(1) †Khomani ~ N||ng

a. /*oe-ke ke n//aa ng n//ng //a'i*
 children-P DECL stay MPO hut inside
 the children are in the house

b. *n-a //au !o ng !khaa*
 1S-SC dig hole MPO water
 I dig a hole for water (Westphal f.n.)

(2) Strandberg |Xam

a. /*k'waa n/a-ng /am u'i !hãu au !k'waa ts'axau*
 hartebeest head-DECL take.up rise thong MPO hartebeest eye
 The hartebeest's head removed the thong from its eye. (Bleek & Lloyd 1911: 6-7)

b. *hi-ng /ũeng-ki 'ee //xauken au /o'a au hĩ /kx'aa*
 2-DECL be.thus-? enter blood MPO stomach MPO 2 hand
 They put the blood in the stomach by their hands like this. (Bleek & Lloyd 1911: 278-9)

> more than two postverbal participants imply multiple MPO adjuncts

2.1.b. Taa branch of Tuu (East !Xõo)

- cross-referencing of object on transitive verb (involves complex gender system)

(3) *i qúba sâa //gãã //nǣh'-na sâ'ã*
 CONN HS go spend.day chop.out-2 seed.2
 and are said to have chopped out (tsamma) seeds all day long (Traill ms.)

- cross-referencing of object on MPO *kV*, *tV*

(4) /*qhõo kē #ābe kē tãa #ãã*
 teach MPO:3 black.person.3 MPO:3 person.3 language.2
 teach the black man person's language i.e. !Xõõ (Traill 1994: 88)

- additional oblique markers: /*naV* dative, #*V* comitative

(5) /*qhãã kũ #nũm //Gũli-tê /è dtxó'lu /nã-e #á sãã*
 give MPO:4 two.4 genital.2-P ASS:3 stench.3 DAT-3ANA COM:2 fat.2
 give him their stinking genitals [lit.: stench of their (D) genitals] with the fat (Traill ms.)

- lexicalized collocations between verb stem + oblique marker

(6) *n̄ à //qhúu kã'a tán*
 1S PST snatch MPO:2S 5.DEI
 I snatched it from you (Traill 1994: 118)

> new meanings

(7) *n̄ bà àhn tâna #é'é*
 1S FUT speak COM:1ANA
 I will scold him (Traill 1994: 19)

2.1.c. †Hõa

(8) *Titi 'a ki !oa na*
 PROP exist MPO house in
 Titi is in the house. (Collins 2003)

- (9) *gya''m-/a'a a-tsaxo-cu 'am gye ki //a''e*
 child-DIM.P PROG-cook-give my mother MPO meat
 The children are cooking meat for my mother. (Collins 2003)

2.1.d. Ju (Ju|'hoan)

- interaction of MPO and valence-sensitive verb suffix
- suffix *-a* indexes presence of at least one nominal outside the valence of the predicate

- (10) *aiá tsí vs. aiá tsí-á mí*
 my.mother come my.mother come-VE 1S
 My mother came. My mother came to me. (Dickens n.d.: 19, 20)

- suffix final to verb-chain > predicate marker

- (11) *ha tani u-a e-tsa ko skore*
 1 fetch go-VE 1P.E-D MPO school
 he took us (back) to school (Dickens ms.)

- suffix not necessarily referring to adjacent nominal

- (12) *ka mi ho si /ho-si mi sin ho-a si ko /xoma*
 when 1S see 2 face-P 1S only see-VE 2 MPO sorrow
 As I saw their faces, I felt sorry for them. [lit.: looked at them with sorrow] (Dickens ms.)

- suffix also relevant for all kinds of semantic roles

- (13) *mí !ú.n!a'àn !ái-á goàq#àn*
 1S grandfather die-VE yesterday
 My grandfather died yesterday. (Dickens n.d.: 20)

- multiple MPO adjuncts

- (14) */am n/ui e koh kxae-a //kae//kae ko Landbou kàm khoe-a*
 day.1 certain 1P.E PST have-VE assembly MPO agriculture farm place-?
ko San_Belange //an ha //kae//kae-a
 MPO PROP GEN 1 assembly-?
 One day we had a meeting at the Agriculture Farm for the San Belange Committee. (Dickens ms.)

> MPO for all but first postverbal nominal > *[VERB *ko*+ADJUNCT]

2.2. Verb transitivity and postverbal nominal slots in Non-Khoe

- elements recurrently called "transitive" markers, but transitivity not the central issue

- (a) multiple MPO occurrence makes transitivity account unlikely
- (b) two transitive verbs in series do not alter [VERB_n - OBJECT - MPO+ADJUNCT_n]

- (15) Strandberg |Xam
au si-ken sing /'ãa /ii ha au //uten-//uten
 and 1P.E-DECL HAB carve.up have 1 MPO P-stone.knife
 and we used to cut him up with stone knives. (Bleek & Lloyd 1911: 14)

- (16) Ju|'hoan
dshàú n/óá /'àn ha dà'ámá kò 'm-sì
 woman.1 cook give 1 child MPO food-P
 The woman cooked food for her child. (Dickens n.d.: 23)

- (c) all kinds of postverbal nominals affected, irrespective of semantic role

- (17) Ekoka !Xũu
hã //xãi-ã khōmē
 1 come-VE tomorrow
 he would come tomorrow (König & Heine 2001: 77)

(d) inversion of postverbal participants without any change of marking and of meaning

(18) Ju|'hoan

a. *ha !áí-á /Aotcha kò /ám-à hè*
1 die-VE PROP MPO day-REL be.this

or *ha !áíá /ámà hè kò /Aotcha*
He died in |Aotcha today.

b. *ha gú-á tjù kò //àisi*
1 build-VE house MPO grass

or *ha gúá //àisi kò tjù*
He built the house with grass.

c. *ha kú //ohm-a !aihn kò glúi*
1 IPFV chop-VE tree MPO forest

or *ha kú //ohma glúi kò !aihn*
He was chopping the tree in the forest. (Dickens n.d.: 22)

> relative order + marking of postverbal participants can be insensitive to semantic roles

2.3. What determines the order of postverbal nominal terms? (Ju|'hoan)

(1) Semantically inherent verb role

- semantic role associated with verb transitivity should be closer to verb

(19) *ha g/ae ho-a zo ko !aihn*
1 arrive find-VE honey MPO tree
he came upon a beehive in a tree (Dickens ms.)

(2) Information structure?

- similar pragmatically triggered inversion attested

(20) Aghem (Benue-Congo, Niger-Congo)¹

a. *ò mò fúo kǎ-fú â bǐghá-'kó*
3S TA give CL-rat OBL leopard-CL
he gave the rat to the leopard [as meat]

b. *ò mò fúo kǎ-bǐghá â fú-kó*
3S TA give CL-leopard OBL rat-CL
he gave the RAT to the leopard (Watters 1979: 156)

- ?more general correlation between obliques and new asserted information

"The highly grammaticalized character of core arguments and verbs derives from their typical occurrence in highly presuppositional, low-information environments in conversation. The extra-sentential, non-core grammar of adverbials (obliques) reflects their higher informational role, position at the margins of an intonation unit, and reduced degree of integration with the nuclear clause." (Hopper 1999)

> assumed hierarchy of increasing thematicity: **Adjunct > Object > Subject**

(21) *te !ha-si-a #hai e //ae te tsi-a /Aotcha*
CONN meat-P-REL be.many 1P.E have CONN come-VE PROP

te tsi ge-a /Aotcha ko beke n'è'é
CONN come stay-VE PROP MPO week one
We had a lot of meat when coming to |Aotcha and we stayed in |Aotcha for a week.

> presumably reflected in (18) > higher ranking of thematicity over semantics

¹ Form and position of noun class markers change with different information status. The inversion of participants which are equal on the animacy hierarchy changes meaning.

(3) Animacy

- animate closer to verb

- (22) *te /am n#hao-a e ko n!ama n!áng*
 CONN sun set-VE 1P.E MPO road inside
 The sun set when we were still on the road [lit.: the sun set on us on the road]. (Dickens ms.)

- animacy wins out over thematicity

- (23) *te /'an Tsamkxao ... ko !ha te ce te /'an !'Uu N!a'an ko ka*
 CONN give PROP MPO meat.4 CONN do.also CONN give PROP MPO 4
 and gave meat to Tsamkxao ... and also gave some to Old !'Uu (Dickens ms.)
 also acceptable ... *ce te /'an ka ko !'Uu N!a'an* (Güldemann f.n.)

- animacy wins out over semantics (animacy applies to possessed body part)

- (24) *ká jù ku sìn //ae-a jù g!áú ko tci*
 when person IPFV just hold-VE person hand MPO thing
 when a person just picks up something with his hand ... (Biesele & Güldemann f.n.)

> probable ranking hierarchy of different order parameters:

Animacy > Thematicity > Semantics**2.4. Summary**

- verb transitivity relevant:

- lexicalized presence vs. absence of participant markers
- lexicalized transitivity affects syntax > marking unaffected by zero anaphor (25) and left-dislocation in focalization (26), relativization (27), and topicalization (28)

- (25) Ju!hoan
//akaa aia n/oa koce te /'u-a gui
 then my.mother.1 cook coffee CONN insert-VE salt
khama ha n/a koh /'u-a gui ko n//oq'obe n!áng
 because 1 you.see PST insert-VE salt MPO bottle inside
 my mother made coffee and added salt to it [= coffee], because, you see, she had put the salt into a bottle (Dickens ms.)

- (26) *kò ré ha ú-ú = ha úá kò ré*
 LOC GQ 1 go-VE
 Where will he go? (Dickens n.d.: 26)

- (27) *n!homa m-!a u-a ko-a goaq#an ke he e-tsa Dabe u-a*
 tomorrow 1P.I-P go-VE LOC.4-REL yesterday be.this.4 REL 1P.E-D PROP go-VE
 Tomorrow we should go to this place of the last day where Dabe and I went. (Dickens ms.)

(28) #Hõa

- a. *koloi g//on-a #amkoe ki gyeo na*
 car hit-PERF person MPO road in
 A car hit a person in the road. (Collins 2003)
- b. *#amkoe koloi g//on-a ki gyeo na*
 person car hit-PERF MPO road in
 The person, the truck hit [it] in the road. (Collins 2003)
- c. *gyeo na koloi g//on-a ki #amkoe*
 road in car hit-PERF MPO person
 In the road, a truck hit a person. (Collins 2003)

- valence does not determine very strongly the position of a lexical argument
- > weak syntactic tie between transitive verb and argument (?syntactic VP-constituent)
- > ?"flat" syntactic template of sequentially ordered slots with minimal morphology
- > poor correlation between syntax and semantic roles
- > participant marking varies in unexpected ways, depends on presence/position of other participants

(29) Ju|hoan

- a. *dà'ámá jàn /'àn ha bá kò màrì*
 child.1 good give 1 father MPO money
 The good child gave his father money.
- b. *Kaùh //xòàsì kú nà 'msì*
 PROP always IPFV give.me food
 Kaùh always gives me food. (Dickens n.d.: 23)

(30) Strandberg |Xam

- a. *ha se !ann ha*
 1 IRR hold 1
 he will hold it (Bleek 1956: 406)
- b. *!ann //wē'i u au !ō'ing*
 hold strongly 2P MPO old.man
 Grasp ye the old man firmly! (Bleek & Lloyd 1911: 48)

3. Linear position and verb serialization

- some languages with following verb serial structure:

[**VERB_n OBJECT ADJUNCT_n**] = "nuclear~root ser."

- > not [[**VERB OBJECT**]_n **ADJUNCT_n**] = "core ser." (Olson 1981, Foley & Van Valin 1984)

(31) Mandarin (Sinitic, Sino-Tibetan)

- a. *wǒ qǐng nǐ chī wǔfàn* = "serial verb construction" alias core ser.
 I treat you eat lunch
 I'll treat you to lunch. (Hansell 1993: 214)
- b. *nóngmín dǎ sǐ láng* = "complement construction" alias root ser.
 peasant hit die wolf
 The peasant beats the wolf to death. (Hansell 1993: 228)

- root serialization inhibits most iconic placement of participant as a pivot

(32) Ekoka !Xūu

- cḽ má g!hō àlācící !ún mí*
 3P TOP sit.P tickle stand.S 1S
 **cḽ má g!hō àlācící mí !ún*
 They sit and tickle me up. (König 2003)

- also for perception verbs as "matrix" > kind of non-causative subject raising

(33) Strandberg |Xam

- si tang //a-ng dɔ'a n/ḽ tēe !k'waa aa /uuk-a*
 1P.E ?PF go-? ? see lie hartebeest.1 1REL die-STAT
 We did see a dead hartebeest lying there! (Bleek & Lloyd 1911: 10)

- event- iconicity + animacy overrides semantics

(34) Ju|hoan

ha //ámá !'àn ha jú-sì kò zó
 1 barter give 1 people-P MPO sugar
 He bought sugar for his people. (Dickens n.d.: 23)

> confirms the generally low ranking of semantic ordering parameter

4. Linear proximity and pronominal suffixation (Taa only)

- pronominal suffixes attach obligatorily to certain hosts
- anaphoric agreement only for adjectives and clause-final relative marker *kV*
- mostly anticipatory/ cataphoric marking/agreement with following nominal
- > three syntactic types of nominal triggers:

Table 1: Triggers and targets of cataphoric pronominal suffixes

Triggers ~ controllers	Clitic hosts as targets
(a) subjects after grams of sentence type and subordination	question /V; term focus <i>kV</i> , <i>tV</i> ; manner-reason-purpose <i>bV</i> ; initial relative <i>tV</i> ; intention <i>tV</i>
(b) complements after relational grams and transitive predicates	copulative <i>kV</i> , <i>tV</i> ; similitive <i>bV</i> ; MPO <i>kV</i> , <i>tV</i> ; dative / <i>naV</i> ; comitative <i>#V</i> ; associative /V; verb
(c) possessors	all grams under (a) and (b)

- anticipatory suffixation targets the first possible nominal
- bare vs. complex class-2 nominalization

(35) East !Xõo

a. *ùh ní bà káne kà !qāhe-sà*
 4ANA ? ?IPFV want MPO:2 hunt-NOM.2
 they want to hunt/ hunting (Traill 1994: 17)

b. *ùh ní bà //ūn /à /ùã /àũ //nàa /nēe-sà*
 4ANA ? ?IPFV refuse:1S ASS:2 give:2 tobacco.2 DAT:3ANA-NOM.2
 they refuse (disapprove of) my giving him tobacco (Traill 1994: 30)

(36) *n̄ ní bà #án sān /nā-e !nūle tē*
 1S ? ?IPFV wish:[1S see-3 country.3] COMP
 I want to see the country (Traill 1994: 17)

- initial modifier in nominal attribution

(37) East !Xõo

a. *sí bà 'hǎ-li !nù.ũ 'i Oàa*
 CONN ?IPFV remove-1 hare.1 1ANA child.3
 and was taking out Hare's child (from the skin she was carrying it in) (Traill ms.)

b. *sí /ùa 'hǎ-le Oàa ké !ù.m 'ée #úm tshó.e*
 CONN take remove-3 child.3 MPO:3 eland.3 3ANA palm.2
 and took out the child from Eland's (actually: Drongo's) palm (Traill ms.)

(38) *ké 'Onà.je /nà.n kǎ 'Onà.ã /nà.ã*
 MPO:3 tree.3 head.2 MPO:2 trees.2 heads.2
 on top of the tree on top of the trees (Dickens & Traill 1977: 136)

(39) West !Xõo

- a. *n si n/a-e n//ahe #’o-e*
 1S IPFV see-3 **house** one-3
 I see one house.

n si n/a-i n//aen ti //ari ki
 1S IPFV see-1 **houses** REL:1 many REL:1
 I see many houses.

GENDER 3/1

- b. *//kx’oe n//ahe #’o-an*
rain house one-2
 one cloud

//kx’oe n//aen ka //ari ka
rain houses REL:2 many REL:2
 many clouds

GENDER 2/2

- c. *n si n/a-e //kx’oe*
 1S IPFV see-3 **rain**
 I see rain.

n si n/a-e //kx’oe te //ari ke
 1S IPFV see-3 **rain** REL:3 much REL:3
 I see much rain.

GENDER 3/-

- d. *n si n/a-e //kx’oe n//ahe #’o-an*
 1S IPFV see-3 **rain** house one-2
 I see one cloud.

n si n/a-e //kx’oe n//aen ka //ari ka
 1S IPFV see-3 **rain** houses REL:2 many REL:2
 I see many clouds.

(Güldemann f.n.)

> cataphoric agreement ≠ gender, agreement dissociation within one constituent
 - virtually no exceptions

(40) East !Xõo

- a. *!ù.m à //’à-be !nù.ũ Oaa*
 eland.3 PST take.S-3 hare.1 child.3
 Eland took the child of Hare. (Traill ms.)

- b. */ü !ù.m ’é sí g//kx’ó-e !nù.ũ ’í Oaa /ü*
 so eland.3 3ANA CONN carry-3 hare.1 1ANA child.3 STAT
 So Eland, she is carrying Hare's child (Traill ms.)

- linear order determines proximity~distance between constituents

> proximity overrides semantic and syntactic configuration (attested elsewhere)

Linear syntax overrides semantics as well as hierarchic syntax

Glosses

ANA anaphoric pronoun, ASS associative (= genitive), CL noun class, CONN clause connective, COM comitative, COMP complementizer, D dual, DAT dative, DECL declarative, DEI deictic, DIM diminutive, E exclusive, FUT future, HS hearsay, IPFV imperfective, LOC locative pronoun, MPO multipurpose oblique, NOM nominalization, P plural, PERF perfect, PF predication focus, PROG progressive, PROP proper name, PST past, REL relative, S singular, STAT stative, TOP topic, VE valency-external participant

Arabic number followed by S/D/P: person category
 Arabic number without S/D/P: agreement class

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