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, ǂKx'ao||'ãe
2. **ǂHõa** (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); ǂUngkue†; ||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) ǂKhomani ~ 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** /o̱'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) *í qúba sâa //gâã '//ng̰h'-**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) *!qhôo **kē** ǂāb̄e **kē** tâa ǂàã*
teach **MPO**:3 black.person.3 **MPO**:3 person.3 language.2
teach the black man person's language i.e. !Xóõ (Traill 1994: 88)

- additional oblique markers: /*na*V dative, ǂ'V comitative

(5) *!qháã **kū** ǂnûm //Gù̱li-tê /è dtxó'lu /nà-e **ǂ'á** sà̱ã*
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) *nī à //qhúu **kā'a** tán*
1S PST snatch **MPO**:2S 5.DEI
I snatched it from you (Traill 1994: 118)

> new meanings

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

2.1.c. ǂHõa

(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

*hã̀ //xāi-**ā*** *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** //'àìsi*
1 build-VE house MPO grass

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

c. *ha kú //ohm-**a** !aìhn **kò** g/úí*
1 IPFV chop-VE tree MPO forest

or *ha kú //ohma g/úí **kò** !aìhn*
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** !aìhn*
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 mɔ́ fúo kɨ́-fú **â** bɨ́ghá-'kɔ́*
3S TA give CL-rat OBL leopard-CL
he gave the rat to the leopard [as meat]

b. *ò mɔ́ fúo kɨ́-bɨ́ghá **â** fú-kɔ́*
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-**á** = 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) ǂHõa

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 //wẽ'i u* ***au*** *!õ'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 !Xũu

cɪ̃̀ má g!hō ***àlācící*** ***!ún*** *mí*
3P TOP sit.P tickle stand.S 1S

**cɪ̃̀ 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 dǫ'a ***n/ɪ̃i*** ***tẽe*** *!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 *k*V
- 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 *k*V, *t*V; manner-reason-purpose *b*V; initial relative *t*V; intention *t*V
(b)	complements after relational grams and transitive predicates	copulative *k*V, *t*V; similative *b*V; MPO *k*V, *t*V; dative /*na*V; comitative ǂ'V; 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* *ń* *bà* *káne* ***kà*** *!qāhe-**sà***
4ANA ? ?IPFV want MPO:**2** hunt-NOM.**2**
they want to hunt/ hunting (Traill 1994: 17)

b. *ùh* *ń* *bà* *//ų̄**n*** */à* */ùã* */àũ̃ //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* *ń* *bà* *ǂ'án sā**n*** */nā-e* *!nūle* *tê*
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* *'ǂnǫ́-**li*** *!nų̀.ũ̃* *'í* *ʘàa*
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* *'ǂnǫ́-le* *ʘàa* ***ké*** *!ù.m* *'ée* *ǂ'úm tshô.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*** *'ʘnà.je* */nà.n* ***kấ*** *'ʘnà.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 ǂ'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 ǂ'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 ǂ'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** !nu̯.ũ ʘaa*
eland.3 PST take.S-**3** hare.1 child.**3**
Eland took the child of Hare. (Traill ms.)

b. */îi !ù.m 'é sí g//kx'ó-**e** !nu̯.ũ 'í ʘàa /îi*
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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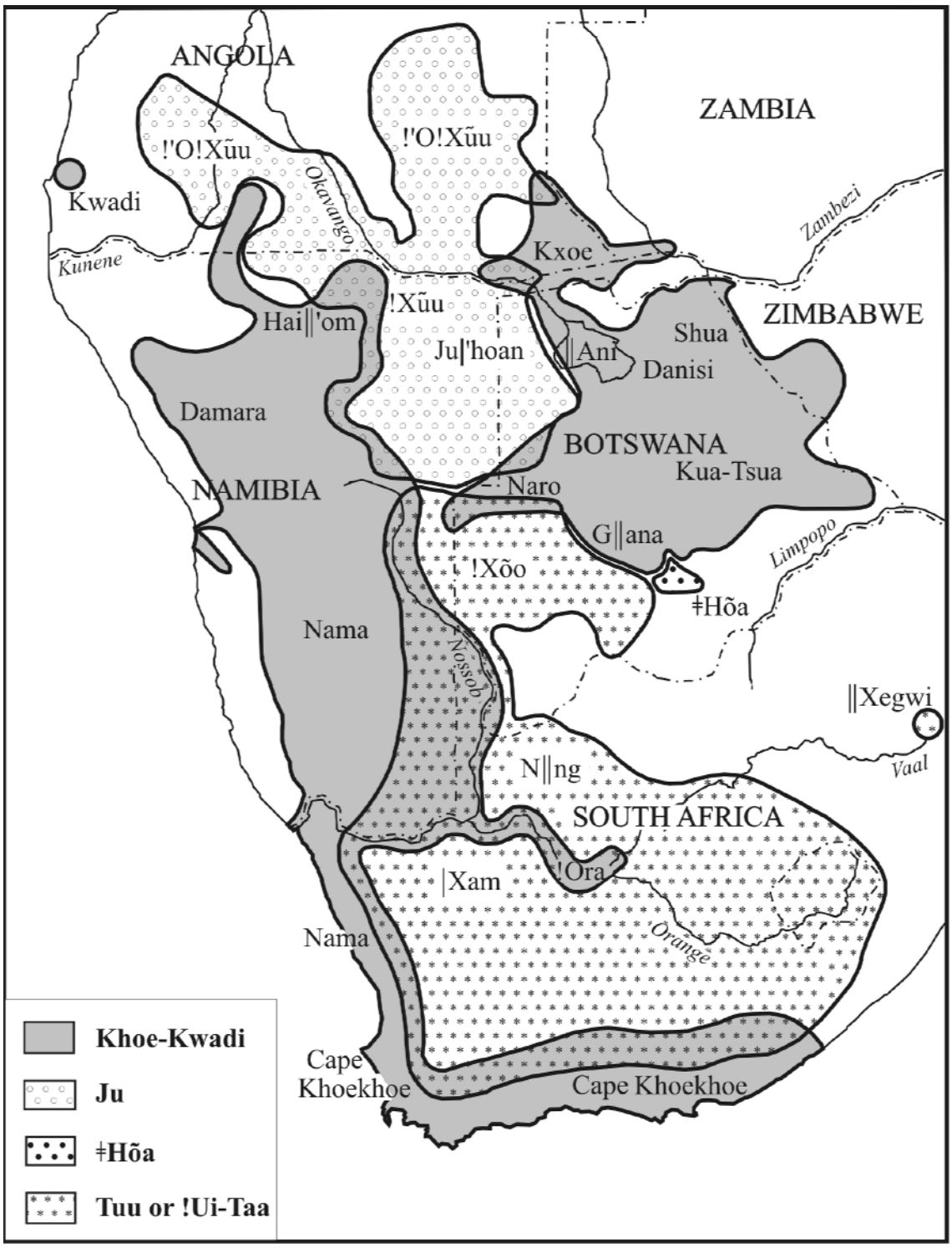
ANGOLA
ZAMBIA
ZIMBABWE
BOTSWANA
NAMIBIA
SOUTH AFRICA
!'O!Xũu
!'O!Xũu
Kwadi
Okavango
Zambezi
Kunene
Kxoe
!Xũu
Hai||'om
Ju|'hoan
||Ani
Shua
Danisi
Damara
Kua-Tsua
Naro
G||ana
!Xõo
ǂHõa
Limpopo
Nama
Nossob
||Xegwi
N||ng
Vaal
|Xam
!Ora
Nama
Orange
Cape Khoekhoe
Cape Khoekhoe
Khoe-Kwadi
Ju
ǂHõa
Tuu or !Ui-Taa