0. INTRODUCTION

(1) Juu = dialect cluster (formerly known as Northern Khoisan¹), recently shown to form a genetic unit (Kx’a) with the ǂHoan language of Botswana (cf. Heine & Honken 2010)

(2) Classification of Juu lects (Snyman 1997, refined by Sands & Miller-Ockhuizen 2000 and Sands forth.), based on regular sound correspondences:

<table>
<thead>
<tr>
<th>Dialectal groups</th>
<th>Well-documented lects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern (N)</td>
<td>--</td>
</tr>
<tr>
<td>North-Central (NC)</td>
<td>- Ekoka !Xun (E !Xun)²</td>
</tr>
<tr>
<td></td>
<td>- Ovamboland/West-Kavango !Xun (O !Xun)³</td>
</tr>
<tr>
<td></td>
<td>- Lloyd’s !Xun (L !Xun)⁴</td>
</tr>
<tr>
<td>Central (C)</td>
<td>--</td>
</tr>
<tr>
<td>South-Eastern (SE)</td>
<td>Juǀ’hoan⁵</td>
</tr>
</tbody>
</table>

(3) Map of Juu dialectal groups (from Sands (forth.)):

(4) Three markers described as deictic demonstratives:

<table>
<thead>
<tr>
<th></th>
<th>E !Xun</th>
<th>O !Xun</th>
<th>L !Xun</th>
<th>Juǀ’hoan (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROX1</td>
<td>é</td>
<td>ë</td>
<td>e</td>
<td>hê/kê</td>
</tr>
<tr>
<td>PROX2</td>
<td>á’ăng</td>
<td>áng</td>
<td>?</td>
<td>--</td>
</tr>
<tr>
<td>DIST</td>
<td>tô’ â–¨ndò’ â  tô’ â–¨ndò’ â  tô’ a–(n)do’a  tô’ â</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Relative constructions in Juu:

a. NC !Xun dialects: REL = PROX e
b. Juǀ'hoan (SE): REL suffix –à on the head noun

Goal of the present paper:

a. part 1: unified pan-dialectal DESCRIPTION of the various uses of those three markers in the modern Juu dialects for which there is enough documentation;
b. part 2: tentative RECONSTRUCTION of the proto-Juu system and a diachronic account of the present situation.

1. MODERN DIALECTS

1.1. North-Central !Xun dialects

1.1.1. Noun-modifying Demonstrative ('this/that NP')

(7) NP, + Cl, + e/ang/to'a (Cl. agrees with head Noun)

a. njôhuñ ñiì tòà mà ñhà ñiì nãâng
message Cl.3 DIST TOP COP Cl.3 (be)good
'That story is a good one.' (H 1987:37(18); O !Xun)

b. gêmhxû hà è
chair.1 Cl.1 PROX
'This (particular) chair' (KH 2001:65; E !Xun)

c. ts’oo ka e na ti ntu’a
sinew.4 Cl.4 PROX 1.SG IPFV throw
'This thread I throw far away.' (119:9899; T; L !Xun)

(8) NP + e/ang/to’a (attested in L !Xun only so far)

a. !Xun tì 'm tci e
!Xun IPFV eat thing.4PROX
'The !Xun people eat this thing' (122:10215, ’U; L !Xun)

1.1.2. Deictic predicates (be here/there ~ be this/that)

(9) NP, (+ TAM) + Cl, + e/ang/to’a (with agreeing class pronoun)

a. dòbà dì mà hà tòà
child.1 (be)naughty TOP 1 DIST
'That is a naughty child' (H 1987:74(31); O !Xun)

b. hà kô mà ñiì dànng
Cl.1 place.3TOP Cl.3 PROX
'His place is this one / here' (KH 2001:65; E !Xun)

c. jhuu tì ka e
meat thorn.4 IPFV Cl.4 PROX
‘this is an animal thorn (i.e. horn).’ (119:9899; T; L !Xun)
NP (+TAM) + e/ang/to’a, without agreeing class pronoun:

a. m’  zů̀hû[xồ]  m-ũ  âŋtank
   1.SG   people.3  TOP-HAB  PROX
   ‘Those are my people.’  (H 1987:74(30); O !Xun)

b. cäng  !lûû  (hâng)  m-ũ  ndồâ
   3.PL place:4 PL  TOP-HAB  DIST
   ‘Their places are those.’  (K&H2001:66; E !Xun)

c. me  n/ee  ti  e
   1.SG  head  IPFV  PROX
   ‘This is my head.’  (10207; |’U; L !Xun)

d. ĕru  to’a,  ta  /au  to’a
   quiver  DIST  and  arrow  DIST
   ‘(T)here is a quiver, and (t)here are arrows’  (119:9938; T; L !Xun)

Note that in examples (9) and (10), the predicative DEM is used as a presentative (this/it is NP) marker.

1.1.3. Identificational copula (L !Xun only)

NP₁ + e + NP₂ = NP₁ is NP₂

a. m  ba  !lu  ti  e  /Oo-/ue
   1.SG  father  name  IPFV  COP /O-|ue
   ‘My father’s name is /O-|ue’  (122:10211; |’U; L !Xun)

b. ma  e  !hii  ta  na  e  /Xue
   2.SG  COP  hare  and  1.SG  COP /Xue
   ‘You are a hare, and I am /Xue’  (119:9900; T; L !Xun)

c. na  /ua  e  !hii  /hua
   1.SG  NEG  COP  hare  real  ‘I am not a mere hare’  (120:9932; T; L !Xun)

1.1.4. Relative Clause

NP₁ + [Cl.₁ + e + RC], with agreeing class pronoun:

a. kûhû  /ârê-á  lâ-gê-hâng  weêsê  yûti  è  lxûûn  dôhá
   road  pass-VE  villages.3-PL all  Cl.3  REL  !Xun  COP
   ‘The road went through all the villages where !Xun people live.’  (H 1987:35; O !Xun)

b. gûmì  há  è  gûê  mâa  n/dûa
   cow.1  Cl.1  REL  come  TOP  be.big
   ‘The cow that is coming is big.’  (KH 2001:119; E !Xun)

c. /ûe  hi  e  e  ti  taba  ts’oo  a
   grass.3  Cl.3  REL  1.PL.E IPFV  make  sinew/thread  ?
   ‘grass out of which we make thread’  (119:9896; T; L !Xun)
(14) NP + [e+RC], without agreeing class pronoun (unattested in Heikkinen’s O !Xun data):

a. gûmî  è  gjè  m̀h  njìd̀à
cow.1 REL come TOP be.big
‘The cow that is coming is big.’ (cf. (13)b)
(KH 2001:119; E !Xun)

b. ǃhui  e  gǂaǂng  !uru
‘many arrows, which filled the quiver’
(119:9938-l; T; L !Xun)

(15) NP+ [Cl.+ RC], with agreeing class pronoun as only REL marker:

a. hà  njǂhng-VE  ts̀ù  ká  d̀há  hà  gá
Cl.1 come.home-VE house.4 Cl.4 COP Cl.1 POS.4
‘He came to his home.’ (Lit. the house which is his)
(H 1987:36(6); O !Xun)

b. ǃhá  ká  ndò̀dà  ká  m-è  ghàngó  m̀h  ndò̀dà  cù
meat.4 Cl.4 DIST Cl.4 1.SG-PST tell TOP DIST lie.down
‘That meat that I mentioned before is the one lying there.’
(KH 2001; E !Xun)

c. ta ǃXun ti ǃama  hi  kue  tci  ka  gluu  ti  e  saan
and !Xun IPFV buy:VE Cl.3MPO thing.4 Cl.4 name IPFV COP san
‘And the !Xun buy from them a thing, the name of which is san.’
(113:9377-l; T, N!; L !Xun)

1.2. Juǀ’hoan

(16) Deictic predicates: PROX1 hè/kè and DIST tò’à. NP+ hè/kè/tò’à = NP is this/that ~
this/that is NP (cf. Dickens 2001b, 2005):

a. jù  hè
person.1 PROX.1/3
‘This is a person’
(D 2005:49; Juǀ’hoan)

b. tjù  kè
house.4 PROX.4
‘This is a house.’
(D 2005:49; Juǀ’hoan)

c. nǂôh  tò’à
orange DIST
‘That is an orange.’
(D 2005:49; Juǀ’hoan)

(17) Relative clause: NP-à + RC = NP which/who RC.

a. m̀h  ’hàn  jù-à  kîi  dcàà  m̀h  tci-sì
1.SG know person-REL IPFV steal 1.SG thing-PL
‘I know the person who is stealing my things.’
(D 2005:47; Juǀ’hoan)

b. jù  njlä-à  m̀h  ’hàn
person a.certain-REL 1.SG know
‘A certain person who I know…’
(D 2005:47; Juǀ’hoan)
Predicative DEM used in RC = Noun-qualifying demonstrative. \( \text{NP-} \hat{\text{a}} + \text{hè/kè/tò'ə} = \text{NP} \) which is this/that = this/that NP (compare the examples below with (16) above)

\[ \begin{align*}
a. \quad & \text{jù-} \hat{\text{a}} & \text{hè} \\
 & \text{person.1-REL} & \text{PROX.1/3} \\
 & \text{‘This person’} & \\
 & \text{(D 2005:49; Ju|'hoan)} \\
b. \quad & \text{tjà-} \hat{\text{a}} & \text{kè} \\
 & \text{house.4-REL} & \text{PROX.4} \\
 & \text{‘This house.’} & \\
 & \text{(D 2005:49; Ju|'hoan)} \\
c. \quad & \text{nëh-} \hat{\text{a}} & \text{tò'ə} \\
 & \text{orange-REL} & \text{DIST} \\
 & \text{‘That orange.’} & \\
 & \text{(D 2005:49; Ju|'hoan)}
\end{align*} \]

1.3. Summary

| Deictic predicate | Ju|’hoan | NC | !Xun | !Xun | !Xun |
|-------------------|-------|-----|------|------|------|
| NP + hè/kè/tò'ə  | NC_1+Cl_1+e/ang/to'a | yes | yes | yes |
| PROX as copula    | --    | NP_1 + e + NP_2 | no   | no   | yes |
| Modifying demonstrative | NP-ə + hè/kè/tò'ə | NP + Cl_1 + e/ang/to'a | yes | yes | yes |
| Relative marker   | NP-ə + [RC] | NP_1+Cl_1 + e + RC | yes | yes | yes |
|                   |       | NP + e + RC | yes | ?   | yes |
|                   |       | NP_1+Cl_1 + RC | yes | yes | yes |

2. DIACHRONIC HYPOTHESIS

2.1. Proto-Juu system

(19) Tentative reconstructions of Proto-Juu forms: (tones are not reconstructed*):

\[ \begin{align*}
a. \quad & *e = \text{PROX} \\
b. \quad & *to'a = \text{DIST} \\
\end{align*} \]

NB: it is not yet established whether the proximal demonstrative âng is to be reconstructed in Proto-Juu or not. I will thus henceforth leave it aside.

(20) **HYPOTHESIS**: *e and *to'a were deictic predicates in proto-Juu, most probably locative in nature (be here/there)*.

(21) Deictic Predicate Structure (DPS) in Proto-Juu:

\[ \text{NP + *e/*to'a} = \text{NP is here/there} \quad > \quad \text{This/that is NP} \]
I propose to consider that class pronouns were the only relative markers (i.e. relative pronouns) in proto-Juu:

Relative Clause Structure (RCS):
\[
NP_i + [Cl_i + RC] = NP \text{ who/which } RC
\]

In order to modify a NP, the two deictics \(^*e\) and \(^*to’a\), being predicates, need to be used in a RCS (RCS-DEM):

RCS-DEM (RCS with deictic predicate \(^*e/\text{to’}a\), \(\approx\)modifying demonstrative):
\[
NP_i + [Cl_i + \text{^*e/}\text{to’}a]_{\text{RC}} = \text{NP which is here/there} \rightarrow \text{This/that } NP
\]

2.2. From Proto-Juu to NC !Xun

2.2.1. DPS: NP + \(^*e/\text{to’}a\)

Marginally preserved in NC !Xun dialects, very often with a presentative/identificational use (cf. ex. (10) above).

From Deictic Predicate \(^*\text{to} \rightarrow\) identificational copula in L !Xun, cf. (12) above:

\[
\begin{align*}
\text{NP+^*e} &= \text{NP is here (Deictic Predicate Structure)} \\
\downarrow &\ \ \\n\text{NP+^*e} &= \text{NP is this / this is NP} \\
\downarrow &\ \ \\n\text{NP+^*e} &= \text{it is NP (^*e = Presentative)} \\
\end{align*}
\]

\[
\text{OPTION 1} \left\{ \begin{array}{ll}
\downarrow & [\text{NP1}_{\text{TOP}} [\text{NP2+^*e}]] = \text{It is NP1, NP2} \\
\downarrow & [\text{NP1+e+NP2}] = \text{NP1 is NP2 (e moves ??)} \\
\end{array} \right.
\]

\[
\text{OPTION 2} \left\{ \begin{array}{ll}
\downarrow & [\text{NP1+^*e}][\text{NP2}_{\text{TOP}}] = \text{It is NP1, NP2} \\
\downarrow & [\text{NP1+e+NP2}] = \text{NP1 is NP2 (identified NP is not NP2 anymore)} \\
\end{array} \right.
\]

2.2.2. RCS: NP + [Cl. + RC]

This structure is marginally preserved in NC !Xun dialects (cf. (15) above). It has been replaced by an innovating structure derived from RCS-DEM (cf. (29) below).

2.2.1. RCS-DEM: NP + [Cl. + \(^*e/\text{to’}a\)]_{\text{RC}}

RCS-DEM > Modifying Demonstrative Structure, with or without agreeing pronoun (not attested in the O !Xun and E !Xun data published so far, but very common in L !Xun.)
a. \( e/to'a \) are reanalyzed as non-predicative demonstratives

b. The class pronoun, reanalyzed as an agreement marker, is dropped when agreement between the head noun and the modifying demonstrative becomes unnecessary/optional.

(28) Hence the coexistence of two superficially identical (NP + \(^*e/to'a\)) but fundamentally different structures in L !Xun:

a. Deictic Predicate Structure \([NP]_{SBJ} + [e/ang/to'a]_{PRED} = \text{here/this/it is NP, cf. (10) above.}\)

b. Modifying Demonstrative Structure \([NP + e/ang/to'a]_{NP} = \text{This/that NP, cf. (8) above.}\)

(29) **Modifying Demonstrative Structure > Relative Clause:** the non-predicative PROX \(^*e\) was reanalyzed as a relative marker (cf. ex.(13)-(15) above)

\[
NP ( + CL.) + e = \text{This NP} \\
[NP ( + CL.) + e]_{TOP} + \text{Clause} = [\text{This NP}]_{TOP} + \text{Clause (e.g. This book, I bought in London)} \\
[NP]_{head} + [(CL.) + e + \text{Clause}]_{RC} = [NP]_{head} [\text{who/which + Clause}]_{RC}
\]

(30) Last NC !Xun structure to account for: \(NP(+TAM)+Cl. + e/to'a\) (DPS with agreeing class pronoun, cf. (9) above).

a. Variant with no TAM marker could be interpreted as a case of topicalization or focalization by extraposition and mere parataxis (e.g. a very good surprise, this phone call),

b. It is not the case of the versions with a TAM marker, which clearly indicates that the sequence [Cl. + e/to'a] is a predicate.

c. The tentative hypothesis I cautiously propose here is that both structures (with and without a TAM marker) derive from a headless relative clause [Cl. + \( ^*e/to'a \)] = ‘this/that (one)’) used in a topical structure, as detailed in (31) below:

(31) From a headless RC to a Deictic Predicate Structure in NC !Xun:

\[
\emptyset_{head-NP} + [\text{Cl.} + \ ^*e/to'a]_{RC} = \text{this (one)} \\
[NP]_{TOP} \ [\emptyset_{head-NP} + [\text{Cl.} + \ ^*e/to'a]_{RC}] = [NP]_{TOP} \text{this (pne) (e.g. “a good surprise, this (is)”)} \\
[NP]_{SBJ} + [\text{Cl.} + e/to'a]_{PRED} = \text{NP is this (one)}
\]

\[\rightarrow \text{the sequence Cl. + e/to'a is reanalyzed as a deictic predicate by analogy with the very similar structure } [NP]_{SBJ} + [e/to'a]_{PRED} \text{ the pronoun being analyzed as a mere (optional) agreement marker, exactly as in other structures involving } \ ^*e/to'a \text{ that we have already seen.}\]
the DPS of the form \( NP + e/to'a \) in modern NC !Xun dialects could thus have two origins:

a. Proto-Juu DPS \( NP + *e/*to'a \) (no change, cf. (24) above)

b. \( NP + Cl. + e/to'a_{non-pred} \) (cf. (27) above), with optional agreement class pronoun.

2.3. From proto-Juu to Juǀ'hoan

2.3.1. Deictic Predicate Structure

The Deictic Predicate Structure is preserved in Juǀ'hoan (cf. ex.(16)), *modulo* the lexicalized contraction of the relative class pronoun into proximal \( è \) (\( > h/k-è \), cf. 2.3.3 below).

2.3.2. Relative Clause Structure

RCS: from Proto-Juu to Juǀ'hoan:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>( NP_{head} + [Cl. (= *hà/yì/ká)^{11} + RC] )</td>
</tr>
<tr>
<td>2.</td>
<td>( NP_{head} + [hà + RC] ), Generalization of the pronoun of class 1 ( hà ) (human + many inanimate entities) to all classes</td>
</tr>
<tr>
<td>3.</td>
<td>( NP_{head} à + [RC] ) (cf. ex.(17)) Reduction of Cl. to suffix (-à), which attaches to the last element of the head ( NP^{12} )</td>
</tr>
</tbody>
</table>

a. Generalization to \( hà \): “human gender – as a salient and central category – is not an implausible target for generalization.” (Güldemann 2004:93, 97)

b. super-L tone \( > L \) tone: the fact that the extra-L tone of the pronoun \( hà \) became a simple L tone on the suffix is not necessarily a problem, given the fact that extra-L tones in Juu languages are very often related to breathy voice, which acts as a tone depressor\(^{13}\). The consonant \( h \) is used to transcribe breathy voice (\( V \) and \( ħV \)) in Juu languages. It is therefore not surprising that the extra-L tone should be replaced by a L tone after the depressor context has disappeared (deletion of initial \( /fi/ \)).

2.3.3. Modifying demonstratives

In Juǀ'hoan, like in Proto-Juu, the deictics \( hè/kè \) and \( tô/à \) being predicates, they may only modify a NP if they are used in a relative clause. The Modifying demonstrative constructions thus underwent the same changes as the Relative Clause Structure (cf. above), with a few more steps for proximal *è:
(35) From Proto-Juu modifying proximal *ê to Ju|’hoan hé/kè:

\[
\begin{align*}
\text{NP}_{\text{head}} + [\text{hâ/hi/ká}^* + [^*\text{ê}]_{\text{PRED}}} & \quad \text{The relative class pronouns are elided and contracted into *ê, but are still interpreted as REL markers.} \\
\downarrow & \\
\text{NP}_{\text{head}} + [h-/h-/k- + [^*\text{ê}]_{\text{PRED}}} & \quad \text{(the alternation between h- and k- being analyzed as a mere agreement phenomenon), and the generalized relative pronoun hâ is inserted to replace the relative pronouns that have disappeared} \\
\downarrow & \\
\text{NP}_{\text{head}} \cdot \text{â [hè/kè]}_{\text{RC}} & \quad \text{general erosion of hâ in all relative constructions.}
\end{align*}
\]

From Proto-Juu to Ju|’hoan, summary:

<table>
<thead>
<tr>
<th>Relative structure</th>
<th>Proto-Juu</th>
<th>&gt;Fusion Cl+ê</th>
<th>&gt;Generalization of Cl.1 hâ + reinterp. of hé/kè + analogy with RC</th>
<th>&gt; Fusion –â</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modifying demonstrative (PROX)</td>
<td>NP {hâ \ hi \ kâ}</td>
<td>ê</td>
<td>NP {h- \ h-}</td>
<td>NP-â \ hé/kè</td>
</tr>
<tr>
<td>Modifying demonstrative (DIST)</td>
<td>NP {hâ \ hi \ kâ}</td>
<td>tô’â</td>
<td>NP hâ \ tô’â</td>
<td>NP-â \ tô’â</td>
</tr>
</tbody>
</table>

3. SUMMARY AND CONCLUSION

(36) Analyzing Proto-Juu proximal *ê and distal *tô’â (as well as proximal *ang if it is to be reconstructed in Proto-Juu) as deictic predicates allows a diachronic account of demonstrative and relative structures in all documented modern Juu varieties.

(37) The proposed changes from Proto-Juu to Ju|’hoan are relatively simple and straightforward.

(38) From Proto-Juu to modern NC !Xun dialects, the picture is less clear:

a. several layers of history are still attested,

b. some structures are superficially identical (in terms of word order) but their actual properties are radically different, because they originate in radically different Proto-Juu structures (predicate vs. modifier).

(39) The hypothesis that I have proposed in the present paper is but a tentative hypothesis. Juu languages are still poorly documented (with the exception of Ju|’hoan), and much work still needs to be done in order to have a better understanding of this language cluster and its recent history.
(40)  From Proto-Juu to modern Juu dialects, general summary:

![Diagram](image)

**ABBREVIATIONS, GLOSSES AND PRESENTATION OF EXAMPLES**

The abbreviations used in examples and tables follow the Leipzig Glossing Rules, except the following:

- **E** = Exclusive
- **I** = Inclusive
- **Cl** = Noun Class pronoun
- **HAB** = Habitual
- **MPO** = Multipurpose oblique marker
- **VE** = Valence external participant indexing suffix

Bare Arabic numbers indicate person categories when immediately followed by number indication (SG, PL); otherwise they refer to nominal agreement classes (1 through 4). The transcription of L !Xun used in the present paper is based on an analysis of Lucy Lloyd's own transliteration (cf. Lionnet, ms.), and follows the orthography proposed by Güldemann (1998) for Southern African Khoisan as a whole, which is itself greatly inspired by the Ju!hoan orthography (Dickens 1991a).

All examples are accompanied by a reference to the publication in which they were found, which consists in the initial(s) of the author(s), followed by the date of publication and page number (and example number in brackets if available), followed by the name of the dialect: *e.g.* (H 1987:37(18); O !Xun).
The reference accompanying examples taken from Lloyd’s notebooks indicate the notebook number followed by the page number, the initial of the informant who contributed the example sentence (N!=Nani, T=Tame, U=’Uma, D=Daqa), and finally the indication of the dialect: e.g. (122:10276; D; L !Xun).

REFERENCES


NOTES

1 Since Khoisan is not thought to be a single genetic unit anymore by most specialists, I will not use the terms “Khoisan” and “Northern Khoisan”.

2 König & Heine (2001, 2008)

3 Heikkinen (1986, 1987)

4 L !Xun is a NC !Xun dialect documented by Lucy Lloyd in the 1880’s. A linguistic edition of Lucy Lloyd’s notebooks is underway (cf. Lionnet 2009 & in prep.), and has yielded enough solid data so far to include this dialect in the present paper.


6 I have taken the liberty to adapt the orthographies chosen by Heikkinen (1986, 1987) for O !Xun and König & Heine (2001, 2008) for E !Xun to the standard orthography proposed by Güldemann.

7 Heikkinen analyzes m-t as being the contraction of the topic marker mä and the pronoun of class 3 yi. KH (2001) propose a different analysis of a similar sentence (ex. (10)b, m-t = the topic mä + imperfective marker ki) which I have chosen to apply to the OǃXun sentence as well.

8 If the reconstruction of PROX as L-toned *e is more than probable (despite the EǃXun form e), the tonal reconstruction of DIST *to’a is slightly less straightforward.

9 Verbals (i.e. predicative elements) are indeed a vast class in Juu dialects, and very often encode concepts that are encoded in other categories in European languages, typically deictics, demonstratives (as is still the case in Juǀ’hoan, but also less often in NCǃXun), interrogatives (be which) and adjectives (be black, be long etc.).

10 The reanalysis of a demonstrative into a relative marker is a well documented syntactic change (cf. relative pronouns derived from demonstratives in many Bantu languages, among other examples)

11 Reconstructed Proto-Juu forms of the pronouns of classes 1 (*hã), 2 (*sì), 3(*yi) and 4 (*ká) proposed by König & Heine (2008:7). Whether the pronoun of class 2 (human plural) was used as a Relative marker in Proto-Juu is still not certain (its uses are very restricted in all modern dialects, in particular it is never used as a relative marker or as an agreement marker with demonstratives)

12 This hypothesis is one of the two tentative hypotheses proposed by Dickens (1991b).

13 The exact nature and origin of the extra-L tone in Juu languages, and the relation between the extra-L tone and depressor consonants or vowel colorings (breathy voice and pharyngealization in particular) is not well documented yet, but there seems to be a relation (if not systematic, at least very frequently attested) between extra-L tones and depressors in Juu.

14 hã, hì and ká are the Juǀ’hoan forms of the pronouns of classes 1, 3 and 4 respectively.

12