

Towards an interdisciplinary approach to linguistic and population history: “The Kalahari Basin area: a ‘Sprachbund’ on the verge of extinction”

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1. State of research

- many languages have become extinct before they could be documented
- most living languages also poorly known > **Table 1**

Language	Phonetics/ phonology	Lexicon	Grammar	Raw texts	Annotated texts
!Ora†?	M	(S)	(M S)	(M S)	U
Nama-Damara	M S	M (M S)	M T (M)	U (M)	U
Hai 'om-#Aakhoe		U	U	U	(S) U
Hiecho a.k.a. Tshwa			(S)	(S)	(S)
Kxoe a.k.a. Khwe	M	M M	M		M M
Ani	S	S U	S	U	U
G ui, G ana	M S	S		U	
Naro	S	M M	S	U	
!Xuun	S	S	M	U (S U)	S U
Ju 'hoan	M M S	M M	M M M	S U	
#Hoan		S	S		
East !Xoon	M S	M	S (U)	U	U
N ng	M	U	S (S)	U (S)	U
Xam†?		(M U)	(S S)	(M S U)	
Xegwi†	(S)		(S)		

Note: M = monograph; S = short treatment; T = thesis; U = unpublished manuscript; (...) = outdated

Table 1: State of documentation for major southern African Khoisan languages

- > only three languages (Nama-Damara, Khwe, Ju|'hoan) reasonably well described and accessible to non-specialists, but overall situation improving:
 - new major publications on Nama-Damara and Khwe
 - research underway on !Ora, ||Ani, G|ui, Naro, Shua-Tshwa; !Xuun; N||ng, Taa
 - ca. 20 academically active linguists doing field work, but few from the region
- > data still insufficient to provide conclusive classification

2. Linguistic classification of southern African Non-Bantu

2.1. Genealogical classification

+ known in the past as "Bushman and Hottentot languages" whereby the latter was aligned genealogically with "Hamitic" in Northeast Africa > today and here:

"San" = hunter-gatherers of southern Africa irrespective of language and genetic type

"Khoekhoe" = concrete ethnic groups characterized by culture, language, etc.

- D. Bleek (i.e. 1927) with 1st classification into 4 groups: 3 San language groups, Khoekhoe

- Schultze (1928) postulates non-linguistic somatic-racial commonality between Khoekhoe and southern San populations and coins the term "Khoisan" based on Khoekhoe elements:

khoi [khoe]

-sa [saa]

-n

autonym meaning 'person' -exonym for hunter-gatherers -common plural suffix

> propagated in a linguistic sense by Schapera (1930), Westermann (1940)

+ linguistically-oriented approaches replace early classifications in the 1950s:

- (I) "lumping" (Greenberg 1950, 1963): subsumed under one genealogical unit, including two East African languages, valid internal subgrouping based on Bleek > **Figure 1**
- followed by Honken (1977), Ehret (1986), working hypothesis for Köhler (1960)
 - formative for perception among non-specialists

(1) Afro-Asiatic

(2) Niger-Kordofanian

(3) Nilo-Saharan

(4) **Khoisan**

Hadza

Sandawe

South African Khoisan (= SAK)

Northern Khoisan (= *Ju*)

Central Khoisan (= *Khoe*)

Southern Khoisan (= *Tuu*)

Figure 1: Subgrouping of Khoisan according to Greenberg (1963)

- (II) "splitting" (Westphal i.a. 1962a, b, 1971): more than half a dozen unrelated groups
- doubts reiterated by other specialists (Traill 1986, Sands 1998, Güldemann forth. c)
 - increasing consensus that for the time being "Khoisan" must not be treated as a family
- > **Figure 2**

+ current trends in classification:

- (I) historical-comparative work within three established families in southern Africa: Khoe (a.k.a. "Central Khoisan") - Voßen (1997) ; Ju (a.k.a. "Northern Khoisan") - Sands (2003); Tuu (a.k.a. "Southern Khoisan") - Güldemann (2005)
- (II) work on promising higher-order affiliations: Ju-#Hoan - Westphal 1974, Sands 2003, Güldemann 2003, Honken forth.; Khoe-Kwadi - Güldemann (2004), Güldemann and Elderkin (forth.); Khoe-Kwadi + East African Sandawe - Güldemann and Elderkin (forth.)

+ Khoe with "individual-identifying features" (in the sense of Nichols 1996) - Voßen (1997)

a) basically head-final in clause and noun phrase, though deviant patterns widespread

b) rich verb derivation system with suffixes (largely reconstructed to Proto-Khoe)

c) some languages with verb suffixes cross-referencing objects (but not subjects)

d) many other grammatical functions in the verb phrase encoded by particles

e) nominal morphology characterized by integration of (partly bound) markers of person, gender, and number (largely reconstructed to Proto-Khoe); marking on the noun and agreement often not obligatory and exploited for derivational functions

- Kwadi with considerably deviant structure, but genealogically related (Güldemann 2004, Güldemann and Elderkin forth.)

- in certain domains, also pronounced differences between and within Kalahari and Khoekhoe

- promising genealogical relation to Sandawe (Elderkin 1986, 1989, Güldemann and E. forth.)

+ major problems arising from genealogical classification:

a) Khoe-Kwadi family internally highly diverse and geographically dispersed in spite of relatively shallow time depth

b) linguistic homogeneity across large areas without indication of migration (e.g., |Xam in the Karoo)

Families and branches	Language(s) or dialects	Remark on classification
(1) KHOE-KWADI		possibly related to Sandawe
Kwadi	single language [†]	newly affiliated to Khoe
<u>Khoe (= Central Khoisan)</u>		
Khoekhoe		
North:	Eini ^{†?} , Nama-Damara, Hai 'om- ‡ Aakhoe	
South:	!Ora-Xiri ^{†?} , Cape varieties [†]	
Kalahari		
East		
Shua:	Cara, Deti [†] , Xaise, Danisi, Ts'ixa, etc.	
Tshwa:	Kua, Cua, Tsua, etc.	
West		
Kxoe:	Kxoe, Ani, Buga, G anda, etc.	
G ana:	G ana, G ui, etc.	
Naro:	Naro, ‡ Haba, etc.	
(2) JU- ‡ HOAN		
‡ Hoan	single language	newly affiliated to Ju
<u>Ju (= Northern Khoisan, DC)</u>		
Northwest:	!Xuun	
Southeast:	Ju 'hoan- ‡ Kx'au 'en	
(3) TUU (= Southern Khoisan)		
Taa-Lower Nossob		
Taa (DC):		
East	N amani [†] , Kaki [†] , East !Xoon, etc.	
West	West !Xoon, N u 'en [†]	
Lower Nossob (?DC):	!'Auni ^{†?} , Haasi [†]	
!Ui:	N ng (i.a. ‡ Khomani, Nlhuki) (DC); Xam ^{†?} (DC); ‡ Ungkue ^{†?} ; Xegwi [†]	

Note: DC = dialect cluster, † = extinct, INDEPENDENT FAMILY, Earlier classificatory unit, *Language data to be collected by CRP*, *Language data and expertise available*

Figure 2: Three language families within southern African Khoisan and their internal classification

2.2. Areal classification

+ linguistic convergence processes widely attested or implied

- lexical isoglosses, but often bilateral (Köhler 1973/4, Snyman 1974, Traill 1986)
- some linguistic subareas in SAK discernible - promising candidates:

(1) "Kalahari Basin" (Güldemann 1998, Güldemann forth. a)

- ?linguistic area before Bantu expansion, gives the term SA "K(hoisan)" a different meaning

- common SAK features typological, rather than defining a genealogical entity

a) high reliance on clicks as phonemic speech sounds, backbone of consonant system

b) root formation with preferred phonotactic pattern: C₁V₁C₂V₂ (clicks in C₁)

c) register tone languages

d) mostly host-final morphology

e) head-final genitive despite different clause word order, grammatically productive noun compounding (> nominal suffixes)

f) neutral alignment for pronoun and noun inflection

g) no subject cross-reference on the verb

(2) Cape (Güldemann 2002, 2006)

- Khoekhoe (Khoe), !Ui (Tuu): geographical inclusion in area of another
- a) comparably small size of consonant inventory, but high phonological load on clicks
- b) inclusive/exclusive distinction in pronominal system
- c) similar semantics, morph type, and position of grams marking tense, aspect, etc.
- d) lexically complex predicates
- e) clausal pronoun pivot
- f) syntactically, rather than semantically triggered marking of participants
- > possible substrate explanation for distinct character of Khoekhoe vis-à-vis Kalahari branch

(3) Central Kalahari (Traill 1980, Traill and Nakagawa 2000, Honken forth.)

- East Taa (Tuu), †Hoan (Ju-†Hoan), G|ui (Khoe)
- a) exceptionally high phonological complexity
- b) lexical isoglosses

2.3. Typological classification

- + striking structural homogeneity of Ju-†Hoan and Tuu > Non-Khoe (Güldemann 1998, Güldemann and Voßen 2000); historical significance unclear
- a) SVO clause order, head-initial noun phrase except head-final genitive
- b) little morphology, importance of constituent order, particles, analytical constructions
- c) verb serialization involving encoding of participants, predication operators, etc.
- d) special type of relational gram as a default marker of valence-external participants
- e) complex and irregular number marking in both nominal and predicative expressions
- f) special type of noun classification
- g) usual inclusive-exclusive opposition in 1st-person pronouns

+ major typological split between Non-Khoe and Khoe-Kwadi > **Table 2**

Feature	Non-Khoe	Khoe-Kwadi
Object position vis-à-vis verb	verb - object	object - verb
Verb position in clause	medial	final
Dominant alignment	neutral	accusative
Head position in noun phrase	initial	final
Preposition	yes	no
Default relational marker	yes	no*
Verb serialization	yes	no
Verb compounding	yes	no*
Verb derivation	no	yes
First-person inclusive	yes	no*
Gender-class ratio	≥ 1	< 1
Number marking on noun	irregular	regular
Number categories on noun	2	3
Number-sensitive stem suppletion	yes	no

Note: * exceptions due to language contact with Non-Khoe

Table 2: Typological split between Khoe-Kwadi and Non-Khoe

- + typological affinity of Khoe-Kwadi to East African languages (Heine and Voßen 1981, Güldemann forth. a): sex gender system, nominative-accusative system, verbal derivation, head-final syntax

3. Basic non-linguistic profile

3.1. Genetics

- early recognition of "biological uniqueness" in the Cape > Schultze's (1928) term "Khoisan"
- > great influence on linguistic and other classifications: propagated later with a wider geographical extension and as a linguistic unity
- shift from phenotypical to genetic markers: maternal mtDNA, paternal Y-chromosome
- Africa with deepest genetic diversity in the world (Watson et al. 1997, Scozzari et al. 1999)
- southern Africa with unique features (Gm groups; ABO and Rhesus blood group systems; mtDNA types) > specific areal profile
- > “Khoisan” can be used in Schultze's original biological sense
- uneven distribution of Khoisan profile over populations subsumed under linguistic concept of “Khoisan” (Soodyall and Jenkins 1998, Chen et al. 2000): largely absent in Khoekhoe-speaking Dama, most Kalahari Khoe, Kwadi (and eastern African Sandawe and Hadza)
- but still largely incomplete classificatory picture; only few sample groups: Ju (two samples from Angola and Botswana), Kxoe, Namibian Nama, Dama
- > homogeneous Non-Khoe vs. diverse Khoe-Kwadi

3.2. Cultural anthropology

- archaeological and historical records attest for two distinct subsistence types among non-Bantu populations, associated with different social identities: forager (> San) vs. pastoralist (Smith 1996, pace Elphick 1977)
- a) forager: small bands associated with a foraging territory; individual mobility; avoidance; exchange networks; variable, but sustained local bilingualism can bridge border between linguistic lineages; frequent client relationship to food-producers > language shift
 - > unilateral gene flow from San groups into non-San groups (Jenkins 1986, 1988)
 - > linguistic affiliation not necessarily indicative of early history
- b) pastoralist (from about 2000 BP): larger, more mobile tribal units; strong foraging component > not reliant on agriculture
 - > historically restricted to Khoekhoe and Kwadi, but reconstructed lexicon relevant for Proto-Khoe and partly Proto-Khoe-Kwadi (Voßen 1997, 2007, Güldemann and E. forth.)
- > homogeneous Non-Khoe vs. diverse Khoe-Kwadi

3.3. Natural environment

- environmental conditions determine modes of subsistence and thus the distribution of certain populations, varied considerably:
 - a) in space: large arid/semi-arid areas unsuitable for agriculture and even pastoralism (e.g., interior of Kalahari, Karoo system, coastal Namib desert)
 - b) in time: climatic changes influenced settlement in general and distribution of culture groups in particular, e.g.:
 - > dry period 7500-4500 BP: i.a. interior Cape (Karoo) largely uninhabited, end associated by change from "Wilton" to "Smithfield" LSA culture (Deacon and Deacon 1999: 126)
 - > considerably more humid period 2500-1500 BP: northern Kalahari (Okavango, Makgadikgadi) (Denbow 1986), coincides with advent and expansion of pastoralism

4. The concept "Khoisan" as a challenge to historical population research

- + "Khoisan" widely conceived of as a kind of homogeneous population type
- > underestimated modern diversity explained usually by a simple scenario involving just two population profiles (but see Westphal 1963, 1980):
 - alleged proto-population with original homogeneous profile (Non-Bantu, Khoisan-genetic profile, forager subsistence) diversified over time
 - modern diversity mediated almost exclusively by divergence and the involvement of just one other external population profile (Bantu, non-Khoisan, agro-pastoralist)
- > **All populations lumped together under "South African Khoisan" originate within southern Africa and were "pristine" hunter-gatherers.**

- + unlikely hypothesis apart from present lack of a plausible holistic divergence scenario:
 - degree + nature of current "Khoisan" diversity in linguistic, biological, and cultural terms
 - sometimes of a maximally possible extent on the world level
 - paradox: Khoe-Kwadi family more diverse than Non-Khoe group which must be older
 - available evidence for genealogical unity of Non-Bantu languages unacceptable
 - assumed great time depth in southern Africa incompatible with "static" pre-Bantu history
 - empirical indications for other population types (e.g., pre-Bantu pastoralism, specific rock art style with no clear link to either San or Bantu)
- > more complex population history before the Bantu expansion involving population movement and contact in and outside the area

- + synchronic population diversity can be the result of different historical scenarios:
 - divergence processes in a more homogeneous population
 - convergence processes between different populations
- > **Alternative approach: Modern population diversity within southern African non-Bantu groups results from both divergence and convergence processes involving demic diffusion of more populations from outside the area concerning in particular modern Khoe-Kwadi speaking groups**

5. The EuroBABEL program and the CRP "The Kalahari Basin area: a 'Sprachbund' on the verge of extinction (KBA)"

5.1. General aim

The main purpose of the EUROCORES programme EuroBABEL is to promote empirical research on underdescribed endangered languages, both spoken and signed, that aims at changing and refining our ideas about linguistic structure in general and about language in relation to cognition, social and cultural organization and related issues in a trans-/ multi-disciplinary perspective.

- + "KBA" CRP combines the urgent documentation of southern African non-Bantu languages with a new approach to the complex historical questions of southern African population history; in particular whether an areal can replace the genealogical view of these languages

5.2. The language documentation component

+ documentation of 7 languages/language complexes from all relevant families > **Table 3**

- two cases of salvage research
- two cases of pan-dialectal documentation
- three cases expanding previously collected data
- two cases with linguistic training of mother tongue speakers

	Language	Status¹	Language shift	Number of speakers
1	Shua cluster	definitely endangered	widespread	?4.000
2	!Ora	moribund	virtually complete	less than 10 remnant speakers
3	Naro cluster	safe ²	partial	less than 10.000 (‡Haba: 100)
4	G ana cluster	unsafe ²	in peripheral areas	less than 2.000
5	Vaal-Orange !Ui	moribund	virtually complete	less than 10 remnant speakers
6	Taa cluster	unsafe ²	widespread	4.000 (West !Xoon 200)
7	‡Hoan	severely endangered	widespread	200

Notes: 1 evaluated on the basis of intergenerational language transmission, 2 some dialects definitely endangered

Table 3: Languages to be studied and their sociolinguistic status

5.3. Other work goals and topics

- (1) multidisciplinary evaluation of the emergence of the ‘Khoisan’ group as a linguistic area that would replace the unsubstantiated genealogical classification
 - > collection and analysis of genetic data across the area – IP4
 - > documentation and historical analysis of kinship systems across the area – IP5
- (2) comparative study of language change under contact through fine-grained investigations of specific contact situations among egalitarian groups with extensive social relations
- (3) refined hypotheses regarding factors and processes involved in social and language contact and emergence of linguistic areas, especially with a strong hunter-gatherer tradition
- (4) further study of the links between language and cognition (e.g. in the domains of spatial and numerical cognition)

+ methodological principles:

- where feasible, involvement and linguistic training of mother tongue speakers as a contribution to language maintenance in the speech communities
- documentation and archiving of linguistic data according to unified standards at the DOBES archive (MPI Nijmegen)
- integration of available data and expertise with new data collection as stipulated by the program > good coverage of all relevant lineages > see Figure 2:

A. Barnard	Naro
G. Boden	Kxoe, Taa
T. Güldemann	Standard Khoekhoe, Nama, !Ora, Taa, N uu, Xam, Ju ’hoan
H. Nakagawa	G ui, G ana
C. Naumann	Taa
H. Ono	G ui
C. Rapold	Hai ’om-‡Aakhoe
A. Takada	!Xuun, G ui

- combination of expertise from the focus area - (southern) Africa (A. Barnard, G. Boden, T. Güldemann, M. Mous, H. Nakagawa, C. Naumann, H. Ono, C. Rapold, A. Takada) - with expertise from other geographical areas which display partially comparable sociolinguistic situations - Australia (W. McGregor), Siberia (B. Pakendorf)
- integration of macro- and micro-perspective: cross-area research on the Kalahari Basin as a whole vs. fine-grained research on individual contact situations
- cross-CRP documentation of selected diagnostic domains: kinship (see IP5), body parts, flora and fauna, physical environment, perception verbs, quantification, space, metaphors and idioms
- multidisciplinary approach involving linguistics, molecular and social anthropology

+ 3 CRP workshops:

- (I) September 2009 in Berlin (Germany) at EuroBABEL Launch Conference
- (II) 2011 in Osaka (Japan) - partly as workshop “Historical linguistic aspects of the Kalahari Basin” in conjunction with the “International Conference on Historical Linguistics”
- (III) 2012 in Edinburgh (UK) - partly as international “Khoisan” conference involving an official call for papers and organized by the CRP

5.4. Project structure of the “KBA” CRP

Project name	Principal investigators
IP1 A documentation and description of Shua (Kalahari East Khoe)	William McGregor (Aarhus University, Denmark)
IP2 Salvage documentation of South African Khoekhoe and !Ui languages	Maarten Mous/ Chisrtian Rapold (University of Leiden, Netherlands)
IP3 Inheritance and contact in a language complex: the case of Taa varieties (Tuu family)	Tom Güldemann/ Christfreid Naumann (Humboldt Universität zu Berlin, Germany)
IP4 The Central Kalahari area with a focus on †Hoan (Ju-†Hoan family): language contact and population genetics	Brigitte Pakendorf/ Chiara Barbieri/ Falko Berthold/ Linda Gerlach (MPI for Evolutionary Anthropology Leipzig, Germany)
IP5 Kinship systems in southern African non-Bantu languages: documentation, comparison, and historical analysis	Alan Barnard/ Gertrud Boden (University of Edinburgh, United Kingdom)
AP The southwestern Kalahari Khoe languages of the G ana and Naro groups	Hiroshi Nakagawa, Hitomi Ono, Akira Takada (Japan)

Table 4: Individual and associated projects of the “KBA” CRP

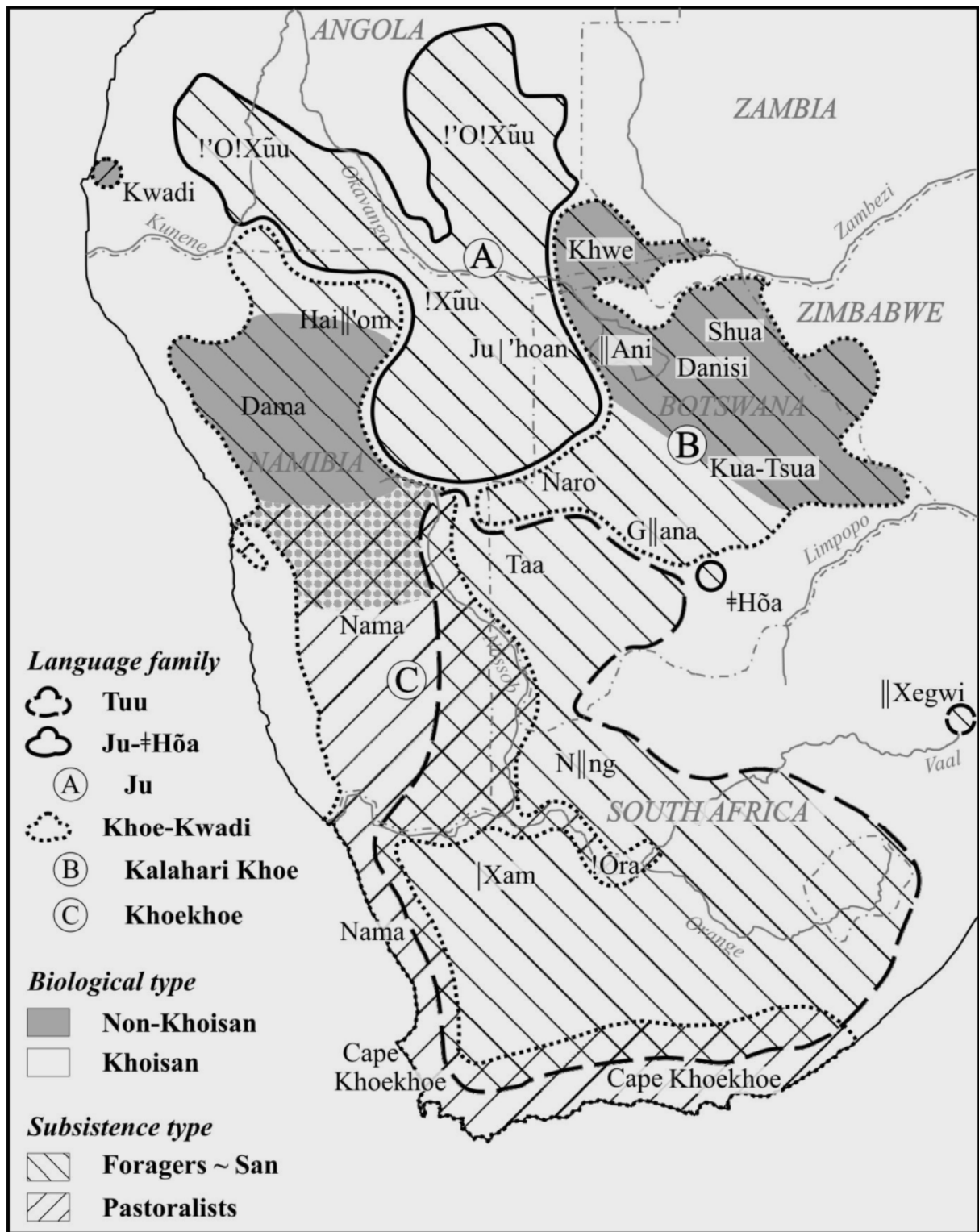
5.5. The “KBA” CRP and other CRPs in the EuroBABEL program

- + Alor-Pantar: spatial reference and numerical expressions, linguistic prehistory
- + Ob-Ugric languages: languages of hunter-gatherers
- + RHIM: marked interaction of referential hierarchies and grammatical relations

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Southern African non-Bantu groups and their basic linguistic, biological (Khoisan vs. non-Khoisan), and cultural (forager vs. pastoralist) classifications

Note: Bantu populations, who are historically distributed all over the area (except most of the wider Cape region and hyper-arid zones) and thus overlap with the groups considered, are omitted. Considerable discrepancies in basic classification features within the non-Bantu speaking populations are evident; for example, the Khoe-Kwadi language family comprises populations of both major cultural and biological types.