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**A UNITY HYPOTHESIS  
FOR THE SOUTHERN AFRICAN KHOESAN LANGUAGES.**

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August 2009.  
Rondebosch.

**A UNITY HYPOTHESIS FOR THE SOUTHERN AFRICAN KHOESAN LANGUAGES. Abstract.**

The study demonstrates for the first time the probable genetic unity of the KHOE, JU and !UI-TAA groups of southern African Khoesan, by means of the first full-scale application of a conventional comparative approach.

It is shown in the first stage that there are repeated cross-SAK resemblances in the morphology of those verbs most frequently enlisted for grammatical purposes in the context of multi-verb constructions; and that these languages furthermore display multiple similarities ‘horizontally’ across their specifier systems, where the resemblances are often also visible ‘vertically’, i.e. down the lists of possible exponents. These structural affinities are sufficiently thoroughgoing to warrant a working surmise that the SAK languages might be genetically related.

In the second stage, cross-SAK comparative material from various sources is presented in the form of arrays. The tabulations reveal a range of repeating alternations involving the basic positional click types, with some associated patterning of the possible click ‘accompaniments’. The fact that the alternations are iterated and do not necessarily involve identities makes it more likely, when combined with the weight of the structural evidence, that the items in the comparative series are inherited than borrowed.

Lastly, preliminary suggestions are made concerning a proto-inventory for the hypothetical ancestral language, as well as the probable shape of a basic stem pattern; and mechanisms are sketched whereby some of the presently seen clicks could have emerged from conventional non-click underliers. The model has considerable explanatory potential, in that it provides a natural explanation for the Back Vowel Constraint, and can moreover account economically not only for the emergence of clicks from a simple inventory of conventional underliers - as well as some of the alternation patterns they participate in - but also for some of the click accompaniments and the patterns of ‘quirky’ alternations these display in comparative series.

Menán du Plessis. August 2009.

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REFERENCES..

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## Abbreviations used in the text.

Al	alienable
Applic	applicative
Assocpl	associative plural
BEN	benefactive
Caus	causative
Cl.	noun class (in the context of Bantu glosses). Numbers after this symbol indicate the specific class as per the Bleek-Meinhof system.
DEMprox	demonstrative pronoun (proximal)
Ext (verb) extension	(verb) extension
Fem	feminine
Fut	future
Impfv	imperfective
Inal	inalienable
Instr	instrumental
IRR	irrealis
NEGimp	negative imperative
PASS	passive
PEK	Proto-Eastern Kalahari KHOR (= Vossen's 'Proto-Ost-Khoe')
Perf	perfect
PK	Proto-KHOE
PKK	Proto-Khoekhoe KHOE
PKalK	Proto-Kalahari KHOE (= Vossen's 'Proto-Nicht-Khoekhoe')
Pl	plural
Pl Redupl	plural (reduplicated)
PossPRO	possessive pronoun
POT	potential
PRO	pronoun
PRO1 <sup>st</sup> plExcl	Pronoun (1st person plural – exclusive)
PRO3 <sup>rd</sup> Isg	Pronoun (third person gender I singular)
PWK	Proto-Western Kalahari KHOE (= Vossen's 'Proto-West-Khoe')
RelPROIsg	relative pronoun (gender I singular)
ResumPROIsg	resumptive pronoun (gender I singular)
Recip	reciprocal

Subjunct	subjunctive
SupplPl	suppletive plural
TA	morpheme expressive of tense or aspect
V	verb
1 <sup>st</sup> sg	First person singular
3 <sup>rd</sup> msg	third person masculine singular

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### **A note on Bantu languages referred to in the text.**

Various Bantu languages are referred to in the course of the work, and the specific relevance or purpose of such allusions is explained each time in the appropriate context. Not only are the structures of these Khoesan-neighbouring languages far better studied and more widely familiar than those of the Khoesan languages, but the Bantu languages also have certain typological features - such as their use of multiverb constructions - in common with the latter. This means that Bantu languages occasionally serve as a useful point of reference: in some cases they provide appropriate analogies; while in other cases, reflection on processes known to operate in them may cast valuable light on phenomena seen in Khoesan languages.

All Bantu languages mentioned in this English-medium work are referred to by their conventional English names (i.e. without the hypercorrect inclusion of the prefix still occasionally seen in the work of some writers). Most of the Bantu languages mentioned in the context of the present study are either from south-western regions (Zones K and R) or the south (Zone S), which means that indication of their Guthrie numbers would not be greatly informative. These distributionally based labels in any case do not imply any genetic classification, but have a cataloguing value only. All Proto-Bantu forms cited are from the 3<sup>rd</sup> Tervuren Series, *Bantu Lexical Reconstructions 3*, as last updated 2005 by the editors, Yvonne Bastin and Thilo C. Schadeberg.

**A note on the fonts used for the phonetic symbols.**

Two different fonts are used for the click symbols in this work, with the bilabial and dental clicks being represented by symbols from Doulos SIL, and the remainder by symbols from Arial Unicode MS. While this lack of consistency may cause purists to frown, the decision is based on a practical need for legibility. The symbols for the five basic clicks in each of the two fonts are compared below, using example words from !Xóǀ.

Comparison of click symbols in two different fonts.

Example gloss	click	Arial Unicode MS	Doulos SIL
			12    10
‘child, son [sg, aɪ]’	bilabial	oqâa	⊙qâa    ⊙qâa
‘rub on, smear’	dental	lgùhm	gùhm     gùhm
‘shoot [pl]’	lateral alveolar	llnûm	llnûm     nûm
‘shave’	palato-alveolar	ʃxùm	ʃxùm    ʃxùm
‘snail’	(post)alveolar	!qhàn	!qhàn    !qhàn

As the illustrations reveal, the small size of the symbol provided for the bilabial click in Arial Unicode MS makes it open to misinterpretation as ‘o’; while the symbol for the dental click in this font is easily mistaken for ‘l’. Conversely, the symbols for the palato-alveolar and lateral alveolar clicks in Doulos SIL are not as clear as those available in Arial Unicode MS, particularly when font size is set below 12 (as shown).

An additional note that may conveniently be made here is that - similarly in the interest of greater legibility - all examples of Khoesan data provided *in figures or tables* are shown in *non-italicized* form. Khoesan and other non-English words used *in the body of the text* are italicized, however, so as to distinguish them from glosses, which are then indicated by single quotation marks.

## **Summary of the work.**

### **INTRODUCTORY SECTIONS.**

#### **Chapter 1. Introduction.**

The overall aims and guiding principles of the study are set out. This is followed by a brief overview of the southern African Khoesan (SAK) languages, with an indication of the various groupings. Relevant features of the SAK languages are described, with tables to indicate associated symbols; and sources of data are listed. A short statement is given of respects in which the languages differ from one another; followed by a summary of properties they share not only with each other, but also with other African languages.

#### **Chapter II. Methodology, and a few other preliminaries.**

The main elements of the methodology used in this work are set out, so as to provide the contextualizing backdrop for the review in the following chapter (of the few comparative studies and related analysis previously undertaken). The demonstration of relatedness will involve a classical two stage process: the first stage will show structural affinities that establish the grounds for a working hypothesis of unity; and the second will attempt to offer corroboration by (a) demonstrating repeating patterns of phonetic alternations, and (b) showing the feasibility of projecting hypothetical common structures.

These notes are followed by a section that anticipates the counter-proposal of a borrowing scenario. The section is needed in order to address an approach prevalent in the field of Khoesan linguistics, currently dominated by 'Splitters'.

**Chapter III. Literature survey. Pt 1: SPLITTERS.** Linguistic arguments traditionally raised to support a premise of absolute prior difference between KHOE and the other SAK languages.

The first part of the chapter considers various typological differences that might suggest the existence of an absolute dichotomy between the KHOE and 'non-KHOE' groups of SAK languages. Crosslinguistic examples are adduced to support an argument that there is not one major difference that could not coexist within an ultimately integrated framework. It may well be the case that the two groups broadly definable as KHOE and 'non-KHOE' are only

distantly related: but there appear to be no good grounds for an absolute assertion that they cannot be related at all.

In the second part of the chapter, it is shown that there is still little compelling evidence for hypotheses that propose to link just the KHOE group of languages (as a distinct set) with languages found further north in Africa, such as one or both of the east African isolates, Hadza and Sandawe. A final note explains why the Angolan isolate, Kwadi, is excluded from the study.

**Chapter III. Literature survey. Pt 2: LUMPERS.** Previous comparative work on the SAK languages, and related studies.

No full-scale conventional comparative study of the southern African Khoesan languages has previously been attempted. This chapter discusses Traill's collection (1986b) of potentially cognate lexical items with a cross-SAK distribution; and Honken's account of correspondence types based mainly on JU-TAA comparative material.

The chapter also examines the theory put forward by Traill and Vossen (1997) to account for certain cross-SAK patterns involving clicks and non-click consonants in alternation. This is followed by a brief illustration of the consequences of accepting the implications of a 'click loss model', thus rounding off the survey with discussion of one last methodological issue.

### **STAGE I: ESTABLISHING THE BASIS FOR THE WORKING HYPOTHESIS.**

**Chapter IV. Cross-SAK similarities involving multi- and serial verb constructions** (or their grammaticalized outcomes).

The chapter outlines Aikhenvald's typological framework for the discussion for serial verb constructions, and then shows how its concepts may be extended to cover the more general category of multi-verb constructions. The various roles of multi-verb constructions in Khoesan languages are described and illustrated, first for the JU and !UI- TAA languages, and then for the KHOE languages. In the course of these accounts, multiple instances are noted across the SAK spectrum of morphologically similar verbs being enlisted for similar grammatical purposes - so as to suggest the strongly likelihood of a unity that involves (1)

the JU and !UI-TAA languages as an entity, and (2) the SAK languages as a whole. The Tables at the end present these shared grammatical stems.

## **Chapter V. Cross-SAK similarities in the sub-systems of specifiers.**

The first two sections discuss certain typological differences between the KHOE languages and those of the JU and !UI-TAA groups, in respect of the organization of their specifiers within the noun phrase; and the kinds of constructions specifiers are associated with. The last section focuses on particular uses of specifiers – and other morphemes – in delineating information structure, e.g. through ‘discourse deixis’; or through the characterization of an argument in terms of singleness, uniqueness, or identity. The section concludes with a set of Tables that reveal cross-SAK similarities in morphology throughout the subsystems of deictic, quantifying and descriptive specifiers. This further evidence of cross-SAK structural affinities strengthens the preliminary case for a likely unity of not only the JU and !UI-TAA languages, but also of the latter collectively and the KHOE languages.

## **STAGE II: CORROBORATING THE HYPOTHESIS.**

### **Chapter VI. Presentation of correspondences, and discussion of their implications for eventual reconstruction.**

Patterns of repeatedly similar alternations are shown for stem-initial segments across the SAK spectrum. The tabulated patterns are discussed, and various difficulties presented by the data are identified – in particular concerning patterns involving the click ‘accompaniments’.

### **Appendix.**

Preliminary suggestions are made concerning the likely shape of the basic underlying stem as it might have been found in an ancestral form of ‘common southern African Khoesan’. A model is then presented in which the clicks can be accounted for as emergent segments, precipitated by a multi-factorial combination of processes. This model is seen to offer in addition an explanation for the Back Vowel Constraint. An example of a likely click underlier is then proposed as the kind of member that should be projected for the inventory of proto-segments in the ‘remote common ancestor’ of the SAK languages, on the basis of

specific cases where clicks are known to have emerged. Even this small example case has the potential to explain systematically some of the patterns of alternations involving *positional* click types in cross-SAK comparative series. Specific examples of reconstructed words that might include this segment as their initial are seen to account simultaneously for some of the *characterizations* (i.e. feature specifications) of clicks, while also permitting systematic explanation for several of the patterns in which these ‘accompaniments’ participate in cross-SAK comparative series. A final sub-section elaborates on the potential of the proposed underlier and stem pattern to account for some of the click characterizations associated with voiceless nasal airflow, as well as the ‘quirky’ patterns of alternation they reveal in comparative series.

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## **INTRODUCTORY SECTION.**

Chapter I. Introduction.

Chapter II. Methodology, and a few other preliminaries.

Chapter III. Literature survey, Pts 1 and 2:

Pt 1: 'Splitters'. Linguistic arguments previously raised to support a premise of absolute prior difference between KHOE and the other SAK languages.

Pt 2: 'Lumpers'. Previous comparative work on the SAK languages, and related studies.

## **CHAPTER I. Introduction.**

### **Chapter synopsis.**

The overall aims and guiding principles of the study are set out. This is followed by a brief overview of the southern African Khoesan (SAK) languages, with an indication of the various groupings. Relevant features of the SAK languages are described, with tables to indicate associated symbols; and sources of data are listed. A short statement is given of respects in which the languages differ from one another; followed by a summary of properties they share not only with each other, but also with other African languages.

### **I.1. General introduction.**

Since the present study is comparative in nature, it is essentially a work of synthesis. While it endeavours to bring a new coherence to the field, it inevitably relies heavily on data and other information previously collected by a small and faithful band of great past and present scholars working in association with patient consultants. This inherited body of knowledge and scholarship is received with gratitude and respect.

The Khoesan languages themselves are equally deserving of respect, in terms of the academic approaches brought to bear in studying them. It is, of course, a cardinal principle of modern linguistics that all human languages should be studied in terms of standard methodologies, guided by conventional rules of procedure. The principle of adhering to a conservative approach should probably be observed all the more strongly in the case of languages, such as the Khoesan languages, where there is not a long history of documentation overall, where individual languages are often only sparsely recorded, and where the available material may not have received wide attention from linguists.

The present comparative study of the southern African Khoesan languages embodies an attempt to uphold this principle of conservative approach. This means, amongst other things, that:

- i. The demonstration of linguistic relatedness is based on the classic method (as will be outlined in more detail in the next chapter).

ii. The study aims to offer the simplest model that will account comprehensively for the observed facts. The criterion of comprehensivity rules out omitting parts of the evidence because such facts might contradict pre-existing (but questionable) explanatory scenarios.

iii. Non-linguistic considerations are not admitted as part of any premise on which the linguistic arguments rest. This criterion of 'linguistic considerations only' rules out reference to perceived cultural or 'ethnic' differences as a significant factor; and also rules out the use of popular (but unscientifically established) notions, such as 'ancientness' of clicks, as unexamined axioms.

To expand briefly on the last point, it is a principle of modern linguistics, established by Greenberg (e.g. 1973: 1), that consideration of supposed biological 'otherness' can play no part in the determining of linguistic relatedness (or difference). As he stated:

'... only linguistic evidence is relevant in drawing conclusions about classification. This last is so self-evident when stated that it would seem unnecessary. In fact, disregard of this principle is very common and a subtle source of errors in classification in Africa and elsewhere ... .'

It is worth recalling that Greenberg arrived at his principle directly through his work on the classification of African languages, and in particular through his efforts to dismantle the pseudo-grouping set up as a result of the unfortunate Hamitic fallacy, in which Namibian Khoekhoe (or Nama, then sometimes also still referred to as 'Hottentot') was placed in the same grouping as a wide range of disparate north African languages.

As for notions of 'ancientness', firstly as applied to the clicks, it might plausibly be argued that such highly unusual and cross-linguistically rare speech sounds are more likely than not to be innovations – possibly even relatively recent ones. There is no reason to exclude the possibility that the structural divergences that have come to distinguish the different groupings of the modern SAK languages might have occurred independently, i.e. in a series of events long preceding a separate phenomenon of click emergence in the region.

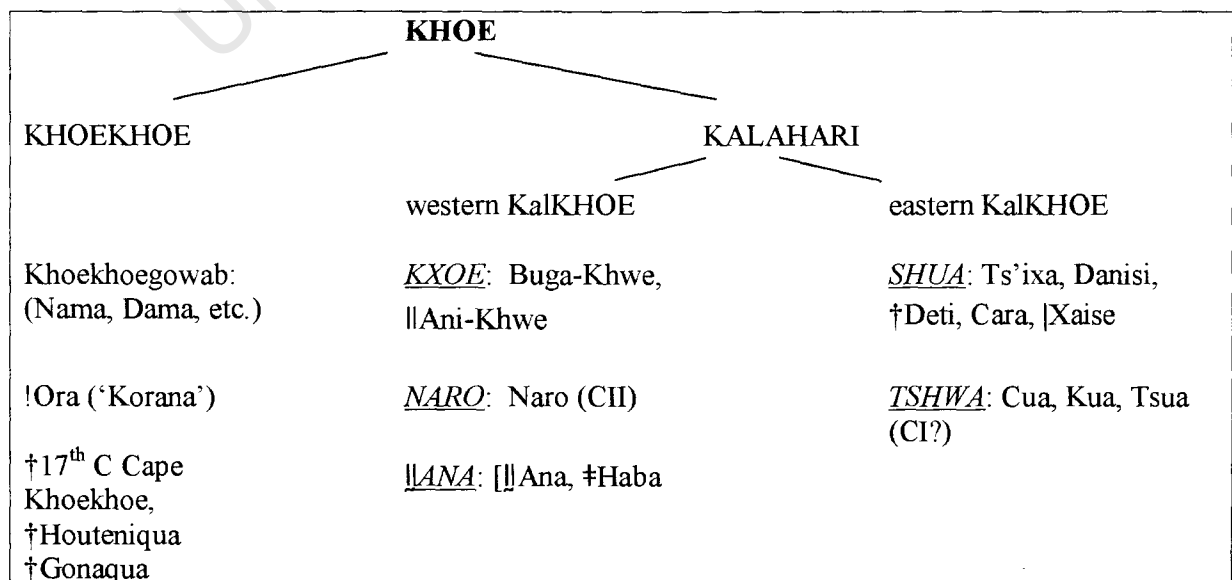
The 'ancient' status often attributed to the Khoesan languages themselves is equally without any linguistic warrant, or even meaning. (It has been suggested by one linguist (Nichols 1996) that, given the inevitability of language change over time, involving such aspects as reorganization, grammaticalization, and gradual attrition of morphemes, the

formally discernible integrity of any lineage might not extend beyond approximately 8000 years.) The specific notion of Khoesan ancientness seems to have arisen through an irrational linkage between the ‘ancient’ lifestyle supposedly preserved by modern hunter-gatherer communities still *in situ* in the region - and the diverse languages they happen to speak. This idea is sometimes accompanied by an evident belief that Khoesan languages have managed to behave unlike any others in never changing over time. Muddled thinking of this kind has occasionally led to absurd suggestions that study of the Khoesan varieties, conceived of as ‘fossils’ of language in some still primordial state, might even give us clues to the very origins of human language. In reality - apart from their clicks - the general characteristics of the SAK languages are for the most part rather ordinary, and even seem familiar when looked at (as they should be) in the context of other African languages.

## 1.2. Brief preliminary overview of the southern African Khoesan languages.

For reasons that will become clearer in the course of later discussion, the present study focuses only on the major groupings of southern African Khoesan, which are (or previously were) found mainly in Angola, Namibia, Botswana and South Africa, with a small presence in neighbouring countries. These languages (many of them now sadly extinct) may be broadly divided into the KHOE languages (Fig. 1) and the ‘non-KHOE’ groups of JU and !UI-TAA (Fig. 2). The following brief overview is offered solely for purposes of preliminary orientation.

**Fig. 1.1.** The KHOE languages. (Based on information in Vossen 1997.) [† > extinct]



**Notes to Fig. I.1:**

- i. As shown, KHOE has two major branches: the KHOEKHOE and KALAHARI Khoe groups. The latter branch has formerly been referred to as ‘Central Bushman’ (D. Bleek 1929), TSHU-KHWE (Westphal 1971), and ‘non-Khoekhoe KHOE’ (Vossen 1997). The alternative term ‘Kalahari Khoe’ was brought into use by Güldemann and Vossen (2000). The list of varieties within some of the Kalahari dialect groups is not exhaustive.
- ii. Although some authors (e.g. Baucom 1974) have used the term ‘Central Khoisan’ as a term for the KHOE languages overall, the usage is potentially confusing, and is not adopted here.
- iii. The unity of these languages is not in question, and reconstructions have been proposed for Proto-KHOE and various interstages (Vossen 1997).

The remaining SAK groups have not previously been shown to constitute a genetic unit, while any relationship of this general grouping to KHOE in turn has likewise not previously been shown.

**Fig. I.2.** The groupings of remaining SAK languages. [† > extinct]

JU	(isolate)	TAA (& ‘Lower Nossob’) !UI	
Ju ’hoan	E. #Hoan	!Xóǿ (SVI)	† Xam (SI)
‘Auen’ (‘NI’),		W. !Xóǿ	†  Ǿ!ke (SIa)
‘!Kuǿ’ (‘NII’)		E. !Xóǿ	†#Uǿkwe (SIIb)
!Xǿǿ (Central JU)		† ’Auo (SIV)	#Khomani (SIIa) (‘Nluu’)
!Xǿǿ (Northern JU)		†K’u ǿ:si (SIVb)	†(  Xegwi) (SIII)

**Notes to Fig. I.2:**

- i. The numbers in parentheses are the classifications (1956) of Dorothea Bleek.
- ii. The names JU, TAA and !KWI (or !UI) were devised by Westphal (1971), who based them on generic terms widely used in each respective group for ‘person’. (Use of the revised spelling ‘!UI’ appears to date from Güldemann and Vossen 2000.)

- iii. The subdivision of JU, i.e. the ‘Northern Bushman’ of Dorothea Bleek, was determined by Snyman (1997). For discussion of the identity of Lloyd’s ‘!Kung’ (NII) see Dickens (1996).
- iv. The placement of Eastern #Hoan is problematic because of the high frequency of loanwords which could locate it either within JU or !UI-TAA (cf. Traill 1973, 1974a). More information of a structural kind is needed to settle the question, although an argument by Honken for its classification as ‘Northern Khoisan’, i.e. JU, is said to exist in manuscript form (pers. comm. from Bonny Sands). The language is only now being fully documented.
- v. A clear case for the unity of the !UI-TAA (or ‘Southern Bushman’) languages has been made by Güldemann (2004c), who proposes the group-name TUU (2004b).
- vi. The description of the archival !’Auo (or !’Auni) of Dorothea Bleek (1937) as ‘Lower Nossob’ is Güldemann’s (2002b, 2004c), while the assignment of Storey’s K’u|ha:si to the same group is Traill’s (1999).
- vii. The #Khomani of the archives (Doke 1937, Maingard 1937) appears to be the same variety still spoken by contemporary speakers who identify themselves as #Khomani. The still extant form of the language has more recently come to be referred to as ‘N|uu’; and linguists have suggested that this name may be considered a cover-term for a spectrum of !UI varieties including the archival D|huki of Westphal (Güldemann (ed.) 2000).
- viii. The variety identified as ‘#Uŋkwe’ (SIIB) was essentially the idiolect of Kunraad Stazen, which Meinhof recorded (1928-9) at Warrenton, near Kimberley. Dorothea Bleek identified it (1956) as ‘!lKxau’ (‘Red Ant’) after the name of the consultant’s clan, although Meinhof reports that Stazen spoke the dialect of his mother, who was from the #Uŋkwe (‘Dansels, Danse’ [?]). It is likely that these communities spoke a variety forming part of the general N|uu spectrum.
- ix. The exact placement of the eastern outlier, !lXegwi, is uncertain because of the fragmentary nature of the data (Lanham and Hallows 1956a,b) and because of the many Bantu-like aspects of its syntax (Ziervogel 1955).

- x. A number of other fragmentary records (seeming to reflect idiolects of unknown dialects) are not mentioned in the table. These include the varieties sketched by Wuras (1919-20 [c.1850]) and Anders (1934-35).

It is here simply noted for the present that there are in addition two isolate (i.e. unplaced) languages of east Africa that also use clicks, and which have occasionally been lumped together with the SAK languages into a general category of 'Khoisan' (e.g. Greenberg, 1963 and earlier), also sometimes referred to as 'Macro-Khoisan'. (Although popularized by Schapera (1930), the term 'Khoisan' was coined - as Beach (1938: 278) pointed out - by Schultze (1928), who used it in a general anthropological sense.) A number of scholars in recent years (e.g. Sands 1998, Güldemann and Vossen 2000) have retained this term as a label of convenience for the languages, but without endorsing any notion that it implies a genetic classification. A third isolate, Kwadi, was a 'click language' formerly used by the Bantu-speaking Kwanyoka (or Kuroka) community in Angola. The reasons for excluding these three isolates from the ambit of the present study will be given in Chapter III (Part 1).

### **I.3. Selected relevant characteristics of the SAK languages, with particular focus on the conventions used to represent them.**

This section briefly outlines various characteristics of the SAK languages, such as their distinctive vowel features, their tonal character, the general shape of their stems, aspects of their non-click consonant inventories - as well as aspects of the clicks themselves and their diverse 'accompaniments'. The main purpose here is not to give an in-depth discussion of these characteristics from a technical point of view - but rather to explain for the benefit of non-Khoisanists some of the conventions used in their *representation*, so as to facilitate the reading of this work and the comparative tables that accompany several of the chapters. In addition, as the overview proceeds, various factors are incidentally highlighted as seeming in need of explanation, i.e. within the framework of any integrated explanatory model that might ultimately be offered.

#### I.3.i. Tones.

All Khoesan languages make use of distinctive tones (although these are not always clearly or consistently indicated in some of the older records of archival varieties).

Different conventions are used to represent the tones in different languages. In the case of Nambian Khoekhoe, the fact that voicing is not distinctive in this variety allows for an orthographic use of the letters ‘b’, ‘d’ and ‘g’ to signify ‘words with one of the lower tone melodies’, while the letters ‘p’, ‘t’ and ‘k’ are used to indicate ‘words with one of the higher melodies’ (Haacke and Eiseb 2002: iv). The invaluable *Khoekhoegowab Dictionary* of these authors also provides more detailed tonal information, with the four tones of the language represented by means of acute, double acute, grave and double grave accents. (These latter are the forms that will be cited in the comparative tables.)

In the case of the TAA language, !Xóǀ, Traill uses conventional IPA diacritics - including the circumflex - for tone, and also indicates two Tonal Classes (cf. 1994: 23-24), where Tonal Class I ‘determines a melody that is level’ and Tonal Class II a ‘melody that falls’. (One source of minor potential confusion is the fact that Namibian Khoekhoe uses the circumflex to indicate *nasalization*.)

### I.3.ii. Distinctive vowel features, and other aspects of vowels or vowel sequences.

Up to four distinctive vowel features are represented in some of the Khoesian languages, though it remains unclear whether they are all actually distinctive. Vowel length, for example, is regularly indicated – yet it is by no means clear that such vowels are phonemic (pers. comm. from Bonny Sands).

Traill noted (1985: 68) in connection with the vocalic segments of !Xóǀ,

‘vowels may be underlyingly nasalized, breathy voiced, glottalized, pharyngealized and combinations of these’.

The conventions later used by Traill in his dictionary (1994) to represent these distinctive features for !Xóǀ are shown below, alongside equivalent representations for (i) Khoekhoegowab (i.e. Nama, Dama and related dialects) in the modern standard orthography (following Haacke and Eiseb 2002, and Curriculum Committee for Khoekhoegowab 2003); (ii) Ju|’hoan, showing the conventions used in the revised orthography of Dickens (1994); and (iii) the representations used for |Xam by Bleek and



Lloyd (2001 [1911]). The additional entries given in a number of cases show alternative forms used in the present study (in an attempt to facilitate direct comparison).

**Fig. I.3.** Vowel features and their representation in selected SAK languages.

Distinctive vowel feature	Khoekhoe(gowab)	Naro	Ju 'hoan	!Xóǀ	Xam
+ Long	ā	aa	aa	aa	ā; a:
+ Nasalized	â	aan	ã	ã	ã
+ Pharyngealized	-	ǁ	aq	ǁ	ǁ
+ Breathy voiced	-		ah	ah	-
+ Glottalized	-		a' [aʔ]	a'	-

The following notes expand briefly on the conventions used to represent the vowel features in different languages.

*Vowel length.*

A long vowel is indicated in some of the languages by a doubled symbol, but in others by a macron, and in still others (particularly some of the archive !UI languages) by a colon. It is noted, however, that in the analysis of Miller-Ockhuizen (2001), Ju|'hoan at least 'does not show a true vowel-length contrast, since there are no minimal pairs distinguished by length alone'.

*Nasalization.*

As Figure I.3 shows, a number of different conventions are used to indicate this feature – with the tilde being perhaps the most transparent. The decision by Dickens to indicate a nasalized vowel (or vowel sequence) in Ju|'hoan by means of an internal letter 'n' was taken for practical reasons, since the device then leaves space for the indication of tones. In the interest of clarity, this 'diacritic' *n* will be italicized wherever it occurs in cited forms.

The convention in modern standard Namibian Khoekhoe, as seen, is to represent nasalized vowels by means of the circumflex. In an attempt to ‘harmonize’ the examples for Khoekhoe with other data presented – so as to facilitate comparison - this feature is represented (in the context of the Main tables *only*) by means of an italicized letter *n* following the vowel sequence, as shown in the second column of Fig. I.3 above. (Orthographic versions are shown alongside these retranscriptions in square brackets.) This modification is not always felicitous, and the reason for italicizing the *n* is to try and preserve the distinction between nasalization as a feature – and an actual nasal segment within the word. It should also be noted that it is only possible to make such a mechanical retranscription for the Namibian Khoekhoe examples because expanded notations are already provided by Haacke and Eiseb (2002).

In the case of data for KHOE languages of the Kalahari branch, as well as for the TAA language, !Xóǀ and the !UI language, |Xam, the tilde of original sources has *not* been retranscribed in a similar way – for reasons of methodological caution. Firstly, any artificial retranscription carries the risk of introducing artefactual elements, or alternatively of obscuring intended distinctions. Secondly, in the particular case of an archival language - such as |Xam - the imperative to preserve the representation in its original form (no matter how flawed it may be adjudged) outweighs the requirement for consistency, which may even be largely an aesthetic need. As already noted, the primary reason for retranscribing the circumflex of the Khoekhoe data is to facilitate comparison. In the case of the tilde used in several other languages, the symbol is readily interpreted as an indication of nasalization, and its retention should therefore present no practical difficulty.

#### *Pharyngealization.*

The feature of vowel pharyngealization is indicated either by a subscript tilde, or by a following q (either superscripted, or - in the orthographic convention of Jul’hoan, written as a letter after the vowel). (The feature of vowel pharyngealization is not reconstructed for Proto-Khoe by Vossen (1997: 335), who treats it, at least in earlier discussion (1988), as an emergent property possibly attributable to the perseverant influence of a preceding uvular click accompaniment.)

### *Breathy-voicing.*

This vowel feature is represented in both Jul'hoan and !Xóǀ by a letter h following the vowel. (A theory of Traill's (1974b) suggests an explanation for the breathy-voicing of vowels as an emergent colouration that may be attributed to the influence of a preceding aspirated segment.)

### *Glottalization.*

The 'interrupted vowels' of some varieties, e.g. Jul'hoan, are 'separated by a momentary disruption of voice' (Snyman 1970: 33). This is represented orthographically by the apostrophe symbol between two vowels, as V'V.

### I.3.iii. Clicks.

Very simply, a click is a special type of double articulation where an occlusion seals off part of the space between the two constrictions. Because release of the occlusion is associated with a transient vacuum - or rather 'low-pressure air pocket' (Miller, Brugman, Sands and others 2009) - there is an ingress of air and the acoustic effect of the suction-breaking 'click'. As put by Traill (1985: 102): 'rarefaction of a pocket of air trapped between an anterior closure at the lips or teeth or behind the teeth and a posterior closure on the velum results in a click being produced on release of the anterior closure.' (As noted below, however, more recent studies suggest that the posterior 'constriction location' may be post-velar.)

Traill (1985) found that, with the exception of the bilabial click, the anterior closure involves a single articulatory target in the dental or post-dental region. In a feature-based descriptive system, he suggested that all clicks (except the bilabial) might therefore be specified as [+coronal].

**Fig I.4.** Summary of basic click positional types.

IPA symbol name	⊙ ‘bull’s eye’	‘pipe’	‘double pipe’	‡ ‘double-barred pipe’	! ‘exclamation point’	(!!)
Romanized, in SA lgs & Naro (KHOE)	(pɔ)	c	x	tc	q	
Click name	bilabial	dental	lateral alveolar	palato-alveolar	(post)alveolar	retroflex variant of !
Properties		fricative	fricative	abrupt, laminal	abrupt, apical	

**Notes to Fig.I.4:**

- i. The bilabial click is confined to the !UI-TAA languages (and Eastern †Hoan).
- ii. A dental variant of the lateral click [ ||| ], described as ‘a forward released denti-alveolar lateral click’, has been found in Mangetti Dune !Xung (JU) by Miller-Ockhuizen and Sands (2000).

*The ‘Back Vowel Constraint’.*

Clicks are typically associated, as noted (1938: 278) by Beach, with a following back vowel (the Back Vowel Constraint), and apparent exceptions can usually be traced to earlier forms meeting this condition. Traill, for example, observed (1985: 90-91) in connection with certain words commencing with the dental [|] or palatalalveolar [‡] clicks, that the long *front* vowel these reflect in their singular forms can be shown to derive ‘from underlying forms containing a stem vowel *a*’. Traill characterized the vowel change as an assimilation ‘to the Class 1 noun suffix *-i*’, citing the contrast between singular and plural forms of these nouns as evidence. Some of his examples are shown below.

**Fig. I.5.** Based on Traill (1985: 91) though with some minor corrections of accompaniments made on the basis of his subsequent work (1994), showing show how an apparent violation of the Back Vowel Constraint can be explained: in the cases below, the front vowels following the click arise as the result of assimilation to a following (high) front vowel.

gloss	singular	plural	
be	ǀi		
lover	ǀi-i	ǀà-ba+tê	
buffalo	ǀqhi-i	ǀqhá-ba+tê	
steenbuck	ǀi-i	ǀà-ba+tê	
‘shoot it! (Cl. 1)’	ǀʔi-i	ǀʔá-a+sà	(nominalization)
dog	ǀqhi-i	ǀqhá-ba+ tê	
sp. bush	ǀqhé-e	ǀqhá-m	

Noting that it is typically dental and palatoalveolar clicks that co-occur in this way with non-back vowels, Miller, Namaseb and Iskarous (2007) conducted an investigation into the articulatory bases for the back vowel constraint, using data from Khoekhoegowab. They found that the palato-alveolar click has a posterior closure in the pharyngeal region, as opposed to the postalveolar click [ǀ], which ‘involves a uvular posterior constriction’. These authors offer an explanation for the Back Vowel Constraint in terms of associated muscular physiology. In this model, ‘front vowels [i, e], (or just [i] in some lects) are constrained from occurring in front of "back" consonants – [ǀ] and [ǀʔ] function as "back" clicks in most languages, but [ǀʔ] and [ǀ] are "front" clicks’ (pers. comm. Bonny Sands).

(An alternative explanation of an ‘historical’ kind is tentatively suggested in the Appendix to the present work, where it is proposed that the Back Vowel Constraint may rather reflect one of the environmental conditions associated with the emergence of clicks.)

#### *Accompaniments.*

The term ‘accompaniment’ was introduced by Traill (1985: 99) as a replacement for older terms such as ‘efflux’ or ‘secondary articulation.’ As he explained, the term ‘accompaniment’

‘is preferable because it is [...] phonetically neutral in that it is applicable to any consonantal material surrounding the click.’

At this point it should be noted, however, that the term ‘accompaniment’ has recently been dismissed by Miller, Brugman, Sands & others (2009) as:

‘a phonetically empty category that has been used as a catchall for every type of modification to click closures and releases ever reported in a click language.’

Although the term ‘accompaniment’ is retained in this work, it is used in a general sense only, and the remarks of the authors above should be kept in mind.

In the case of the !Xóǀ (TAA) dialects, Traill (1985: 123-125) identified no fewer than 16 distinctive click ‘accompaniments’. His subsequent dictionary (1994) reflected on additional accompaniment, namely a ‘voiced uvular stop aspirated’, e.g. [G!qh], distinct from the ‘voiced aspirated stop’, e.g. [g!qh]. The fact that this tally of 17 is somewhat greater than the average number of accompaniments typically found in Khoesan languages may be accounted for by the following factors:

- \* !Xóǀ preserves a distinction of *voicing* sometimes no longer present in other SAK languages; furthermore extending this distinction even to the nasal element (which may be voiceless).

- \* Traill distinguished a ‘*preglottalized*’ type of *nasal click*, which he summarizes (1994: 38) as follows:

‘This complex is best described as a click superimposed on the sequence [ʔ], i.e. a velar nasal with a glottal stop onset. The timing of the release of the click is immediately after a brief period of [ʔ].’

- \* Traill identified *uvular* variants of the velar segments in !Xóǀ, with counterpart uvular variants for several of the possible elaborations.

The symbols used by Traill to indicate the 17 different accompaniments identified by him are tabulated in Fig.I.8 below. It should be noted, however, that in concluding their paper

on N|uu, Miller, Brugman, Sands & others (2009) suggest that ‘the contrast between “velar” and “uvular” clicks proposed for the related language !Xóǀ is likely also one of airstream’.

**Fig.I.8.** Summary of the various ‘accompaniment’ types identified by Traill (1985, 1994) for !Xóǀ, illustrated by the (post)alveolar click [!] and shown alongside current orthographic conventions for Namibian Khoekhoe and Ju|’hoan.

	KHOE	JU	TAA		
description	Khoekhoe	Ju ’hoan	!Xóǀ		
	symbols in Haacke and Eiseb (2002)	symbols in Dickens (1994)	symbols in Traill (1994)		suggested standard for !Xóǀ (Traill)
				(uvular variants)	
plain or ‘basic’: inaudible or weak voiceless velar plosive	!g [!]		!	!q (voiceless uvular stop release)	k!
voiced	(g! - traces in !Ora)	g!	!g	!G [N!G] (prenasalized, with voiced uvular stop after release)	g!
aspirated	-	!h [!k <sup>h</sup> ]	!qh (or [!k <sup>h</sup> ])		k!h
voiced aspirated	-	g!h [g!k <sup>h</sup> ]	g!qh (or [g!k <sup>h</sup> ])	G!qh [NG!qh] (prenasalized, with voiced aspirated uvular stop)	g!h
(ejective )				!q' (ejected uvular stop)	k!'
‘fricative’ (+ voiceless velar fricative or affricate)	!kh [!x <sup>h</sup> ~ !kx]	!x	!x		k!x
vcd velar fricative	-	g!x	g!x		gk!x
ejected velar fric./ affricate	(!kx' – in !Ora only)	!k [!kx']	!kx'		k!x'
vcd ejected velar affricate	-	g!k [!kx']	g!kx'		g!x'
‘delayed aspiration’ (glottal fric. assoc. w. nasal venting)	!h [!ʰ]	(n)!h [n!h]	!h [(ŋ)!h]		ŋ!h
glottal stop	! [!ʔ]	!' [!ʔ]	!' [!ʔ]	!' [!ʔ]	k!'
nasal(ized) (vcd nasal)	!n [ŋ!]	n! [!ŋ]	!n		ŋ!
voiceless nasal	-	-	!ŋ		ŋ!
pre-nasalized	-	-	!'n [ʔŋ!n] (pre-glottalized nasal)		ʔŋ!

In summary, and at the risk of simplifying matters greatly, clicks may be said very broadly to be characterized by the following general possibilities of elaboration (where the uvulars are not incorporated into the formulae):

$$i. \quad Q \quad [+plosive] \quad ([+voiced]) \quad \left\{ \begin{array}{l} [+aspirated] \\ [+ejective] \end{array} \right\}$$

In this schema, the letter ‘Q’ stands for a click of any place. The round brackets signify optionality, while curly brackets indicate the choice of one or other of the elements from the enclosed set. The diagram may be variously expanded to yield the following possibilities, where the (post)alveolar click [!] is used for illustration, and where the descriptions are largely based on Traill (1994: 36-39):

Q: a ‘basic’ click, e.g. /!/, where the release is an inaudible velar plosive.

Q [+voiced]: a voiced click, /!g/.

Q [+aspirated]: an aspirated click, /!kh/.

Q [+ejective]: an ejective click, /!k’/ or /!kx’/, where the more common second case involves ‘release as an ejected velar affricate’ (Traill 1994: 36).

Qk [+voiced], [+aspirated]: a click with voice lead, followed by an aspirated stop, /g!kh/.

Qk [+voiced], [+ejective]: a click with voice lead, followed by a voiceless ejective, /g!kx’/.

$$ii. \quad Q \quad [+fricative] \quad ([+voiced])$$

This formula allows for the expansions:

Qx: a click ‘followed by a voiceless velar fricative’ (Traill 1994: 36), /!x/.

Qx [+voiced]: a click with *voice lead*, ‘followed by a voiceless velar fricative’ (same source), /g!x/.

$$iii. \quad N \quad [-voice] \quad Q \quad \left\{ \begin{array}{l} [+aspirated] \\ [+glottalized] \end{array} \right\}$$



These formulae involving a nasal closure allow the following possibilities:

Qh: a click followed by the so-called ‘delayed’ type of aspiration, e.g. /!h/.

Clicks with this type of aspiration may feature the non-distinctive type of nasalization known as ‘nasal venting’ (cf. discussion below, p.).

Q?: a click followed by glottalization, e.g. /!ʔ/, similarly associated with voiceless nasal airflow.

nQ: a nasalized click.

*The phenomenon of nasal venting.*

Mention was made above of a type of non-distinctive nasalization associated with some of the click phonemes. This is now discussed here at some length, because it will be seen later (e.g. Ch. III.Pt 2.3) to feature prominently in discussions of phonetic alternation patterns.

The phenomenon was first identified in Nama and Korana (i.e. !Ora) by Beach, who wrote (1938: 85-87) as follows:

‘When [clicks] are immediately preceded in the same breath-group by a vowel (terminating the preceding root), a very short voiced nasal stop is often (but not always) heard during the occlusion before the *influx* occurs. [...] This nasal stop, together with its accompanying vibration of the vocal cords, ceases just *before* the influx is made. [...] The slight nasal stop which sometimes precedes the influx of clicks containing either of the two glottal types of efflux (e.g. |ʔ and |h) should be contrasted with the definitely nasal type of efflux [...]. And it should also be noted that this slight nasal stop which sometimes accompanies the glottal effluxes is never used in conjunction with the two velar types of efflux [...] (e.g. | and |x).’

Beach went on (1938: 87) to offer an explanation for the process in terms of an articulatory adjustment:

‘During the pronunciation of a vowel, a steady stream of air is flowing from the lungs out through the mouth, vibrating the vocal cords on its way. The moment the occlusion is made for the following click, the passage through the mouth is blocked by the back of the tongue in contact with the front part of the velum. The air coming up from the lungs is pent up at the velum and there is therefore a slight air-pressure on the velar obstruction. If the velar obstruction were released while this slight pressure remained, the following efflux might sound rather velar (like a *k* or *kx*). To obviate this, and to make sure of a silent release of the velar closure, the pressure is sometimes relieved by lowering the back part of the velum for a small fraction of a second so that the pent-up air can escape through the nose. In very fluent speech the air-vent through the nose is sometimes got ready slightly before the vocal cords have stopped vibrating for the preceding vowel, so that the very end of the vowel and the very beginning of the click-occlusion sound nasal.’

This type of non-contrastive nasalization, subsequently termed ‘nasal venting’, was later identified in a number of other Khoesan languages (cf. Traill 1991). In Ju|’hoan, for example, the click accompaniment of delayed aspiration (exemplified in the name of the language) is in reality often associated with nasal venting of this kind.

The glottal stop notation for the ‘delayed’ type of aspiration, introduced by Doke, was described as ‘a phonetic fiction’ by Traill, who pointed out (1995) that Doke’s usage was ‘merely a notational device to indicate that there is no audible release of the secondary (velar) closure’. A particularly clear description was in fact given by Doke himself (1925) in his original statement:

‘In !hũ: each click may be pronounced unvoiced (i.e. without concurrent vibration of the vocal cords), and these unvoiced varieties of the clicks may immediately precede the accompanying vowel, or may be aspirated (i.e. followed immediately by a rush of air causing throat friction), or they may be accompanied by the glottal stop. In this last case, during the closure of the glottis, the velar point of articulation is released silently, and no “*k*-sound” is heard. When the unvoiced click is immediately followed by the vowel, a “*k*-sound” (the result of the release of the back of the tongue from the velum) is distinctly heard. In !hũ: an aspirate is very often found after the glottal stop accompanying a click. (Unvoiced clicks also occur followed by the velar fricative and the ejective velar affricate.)

Traill (1995) provides an overview of the complex phenomenon of delayed aspiration and its association with nasal venting (which may additionally involve an interplay with voicing). As he noted:

‘In Ju (and Nama, incidentally), the nasal venting takes the form of an epenthetic nasalized vowel (voiced) before the click and nasalization of the click.’

Traill’s concern in this paper was to unravel some of the effects the complexity of the phenomenon may have had on the perception of the two types of aspiration - and its reflection in archival transcriptions. One of his conclusions was that certain details of the phenomenon may well have been responsible for Lloyd’s ‘failure to preserve the distinction reliably in Ju’. He noted in particular that her notations reflected in some cases ‘omission of the aspiration and preservation of the nasalization’. (It should be remembered, however, that Lloyd’s !Kung consultants were four children, of whom she mainly worked with only two.)

#### I.3.iv. Non-click consonants.

In addition to their clicks, Khoesan language typically have a series of non-click consonants. These ordinary consonants have a number of interesting distributional properties.

- i. The non-click consonants that occur stem-*initially* may include alveolar, palato-alveolar, velar - and sometimes uvular - segments (stops, fricatives and affricates), which may in the case of both simple stops (‘C’) and affricates (‘CC’) be aspirated or ejective; and furthermore - depending on whether the variety marks the distinction - may be voiceless or voiced (or have voice lead).
- ii. In a few cases an *initial nasal* segment is found to occur in cross-dialectal variation with an oral segment, where the latter is typically an alveolar (plosive or flap) or approximant.

The non-click consonants found to occur in stem-initial position can for the present be given the following idealized representation (where ‘C’ may find expression as a nasal, in which case the possibility of affrication does not arise).

**Fig. I.9.** Idealized representation of a stem-initial non-click consonant and its possible characterizations.

$$C(C)_1 \left( [+voiced] \left\{ \begin{array}{l} [+ejective] \\ [+aspirated] \end{array} \right\} \right)$$

It is notable that the possible elaborations of the stem-initial non-click consonants in a given Khoesan language – as captured in the diagram - typically mirror the ‘accompaniments’ of its clicks (which can also only occur as stem-initial segments). This means, for example, that a language that has voicing as a distinctive feature in its non-click consonant inventory will also have this distinction in its set of clicks (cf. Khwe); while a language with an ejective affricated consonant, such as [kx'], will likewise have an ejective affricated click accompaniment (cf. !Ora, which has, for example, [!kx']).

iii. As mentioned earlier, the typical Khoesan stem appears to have an underlying pattern of the basic form CVCV. It has long been noted that there is a sharp restriction, however, on consonants that may occur stem-*medially*, i.e. as ‘C<sub>2</sub>’. These constraints were identified for Nama and Korana (!Ora) by Beach (1938: 254-282), and have been conveniently summarized by Haacke (1999: 10) as follows:

‘Phonotactic constraints limit C<sub>2</sub> [in Khoekhoe] to either:

A labial plosive/fricative *w* [b/v/β]

an alveolar trill *r*,

A labial nasal *m*,

Or a denti-alveolar nasal *n*.’

Much the same pattern - which seems to suggest a possible loss of intervocalic velar segments - obtains in other Khoesan languages.

iv. It is a characteristic of not only the KHOE languages, but seemingly all Khoesan languages, that they hardly ever feature labial segments as stem-initials (outside of their

notable occurrence in grammatical morphemes). This distributional oddity was noticed, for example, by Beach, who remarked in reference to Nama (1938: 268) that:

‘the labial initials **p**, **b** and **m** are of very rare occurrence and must be regarded as irregular or exceptional.’

A similar observation was made by Dorothea Bleek (1956: 13), as follows:

‘It is noticeable that an initial **b** is not frequent in most Bushman languages, in many it only occurs in borrowed words’.

(It will be recalled that when she was referring to ‘Bushman’ languages, Dorothea Bleek included a ‘Central’ group, which was the sub-branch of KHOE languages today known as the ‘non-Khoekhoe’ or Kalahari group.) Concerning the voiceless bilabial stop [p], she noted (p. 156) in the same work:

‘The unvoiced labial plosive is not a Bushman sound. In the purer languages it is only found in borrowed words, or in imitations of noises.’

At least the nasal form of the bilabial [m] has a small presence, as she noted (p. 131):

‘This nasal is more frequently found in second syllables or at the end of words, than as initial sound. Like the other nasals it occurs alone with syllabic value, often as the form *n* and *ŋ* take before labials. In second syllables it sometimes interchanges with *b*, as *dama*, *daba*, *child*.’

Of course, the existence of such a ‘labial gap’ is not unusual: Indo-European is well-known (Mallory and Adams 2006: 50-51) for its apparent lack of a reconstructible \**b* (though of course it had other labials). The near complete absence of labial reflexes as *initial* segments in Khoesan languages is more striking, and seems to require explanation, given that bilabials occur freely as medial segments, and as initials in *grammatical* morphemes (cf. the masculine singular morpheme *-b*, the applicative verbal extension *-ba*, and the enclitic locative particle *-pa* of Khoekhoewab; or the aspectual morpheme *ba* of !Xóǀ).

To end this sub-section on selected phonetic and phonotactic characteristics of the SAK languages, it may be noted that there appear to be a number of distributional peculiarities amongst those aspects that should be accounted for in an integrated account of the Khoesan languages (e.g. such as might take the form of a model that attempted to project any common original system). Characteristics that seem in need of such explanation may be recapitulated as follows:

- i. There is a restricted reflection of labial segments as outcomes, which very rarely occur stem-initially, except in grammatical morphemes.
- ii. In contrast with medial segments, stem-initial non-click consonants have a more extensive range of possible elaborations, where the latter are partially in symmetry with the range of possible elaborations of click consonants, which also occur only stem-initially in Khoesan languages. (Clicks may occur medially in the Nguni languages, however, and also in Hadza and Sandawe.)
- iii. Segments that may appear medially are drawn from a restricted range, and are seldom (if ever) affricates. Affricates *only* occur as stem-initials.
- iv. Some clicks are regularly associated in Khoesan languages with a following back vowel environment. (Clicks in the Nguni languages often appear to violate the 'Back Vowel Constraint', but in many cases these apparent exceptions can be traced back to underliers that meet the condition.)

#### **I.4. Sources of the comparative data used in the study.**

When it comes to the compilation of comparative lexical data (i.e. during the later stages of a comparative study) one of the major considerations is that there should be enough material, from consistent and accurate sources, to establish the repeated occurrence of particular 'oscillations' across a set of varieties chosen to give representation to all generally agreed-upon sub-groupings. Today, fortunately, there are reliable sources of data available for representative languages of the Khoekhoe and Kalahari branches of KHOE, as well as for JU and TAA. Any linguist who embarks on a work of mere synthesis, such as the present comparative study, is bound to feel a sense of immeasurable indebtedness to

those scholarly giants of the past who have laboured to build up this common store of knowledge.

It remains a minor problem, it is nonetheless acknowledged, that the total numbers of words reflected in some of the dictionaries seem relatively ‘low’ (assuming that there is such a thing as a standard number). Sands, Miller and Brugman (2007) provide the following numbers for comparison:

**Fig. I.10.** Number of lexical entries per dictionary, after Sands, Miller and Brugman (2007).

SAK group	Language and source	Approx. entries
KHOE (Khoekhoe):	Khoekhoegowab (Haacke and Eiseb 2002):	24 500
KHOE (Kalahari):	Naro (Visser 2001):	5 500
KHOE (Kalahari):	Khwe Kilian-Hatz 2003):	< 6 000
JU:	Ju ’hoan (Dickens 1994):	4 600
TAA:	!Xóǀ (Traill 1994):	3 200

Whatever the reasons for this seeming paucity – and it is almost certainly due to under-documentation in the main - there is no question but that it creates difficulties when it comes to the search for comparable lexis across the SAK spectrum. In addition to the small size of the recorded vocabularies available, it appears that inherent regional differences in vocabulary also contribute in part to the short supply of potential cognates. This scarcity of likely affines may have been one of the factors that prejudiced linguists in the past to discount the possibility of SAK unity. It will be seen in later discussion (Chapter VI.1) that this factor limits the number of comparative series that can be produced to demonstrate repeating correspondences involving various accompaniments.

The need for consistency alluded to above has dictated the necessity to leave out data for the isolate Eastern #Hoan of Botswana. This is because the underlying dilemma of placement (raised by Traill 1973, 1974; Westphal 1974) has not yet been resolved, even

though further studies have since been conducted (e.g. Gruber 1974; Collins 1998, 2001a,b; Bell and Collins 2001. More recent work by Honken that reportedly settles the question is unfortunately not yet published.

The same consideration has determined the choice of the languages listed in the mini-table below. The table shows the primary (default) source of comparative lexical data in each case, with notes concerning any supplementary sources that may occasionally be drawn upon, even though it is ultimately preferable to stick to a single source, in the interest of consistency. Sources of information on structural aspects of the Khoesan languages will be given at appropriate points in the course of discussion in Chapters IV and V.

**Fig. I.11.** Sources of comparative data for the southern African Khoesan languages.

Variety illustrated	Primary data source (default in text where not indicated)	Supplementary sources occasionally used
KHOE: <u>Khoekhoe</u>		
Khoekhoegowab (Nama, Dama +)	Haacke and Eiseb (2002)	Haacke, Eiseb and Namaseb (1997)
!Ora (information purposes only)	Meinhof (1930)	Lloyd and Maingard (1932); Engelbrecht (1936)
KHOE: <u>Kalahari</u> (western)		
Naro	Visser (2001) ['Nar-Vi']	Barnard (1985) ['Nar-Ba']
Khwe (Kxoe)	Kilian-Hatz (2003)	
KHOE: <u>Kalahari</u> (eastern)		
Hie-Tshwa-re	Dorman (1917)	
JU: ('Southern')		
Ju 'hoan	Dickens (1994)	Snyman (1970 ['Sn-G'], 1975 ['Sn-D'], 1997)
TUU: <u>Taa</u>		
!Xóǀ	Traill (1994)	
TUU: !Uǀ		
Xam	Bleek and Lloyd (2001 [1911]) (= <i>Specimens</i> )	Bleek (1929, 1956)
ǀKhomani ('N uu')	Doke (1937) ['Do']; Maingard (1937) ['Ma']	Miller, Brugman, Sands & others (2009)

In the context of quotations, the original conventions of an author (e.g. Hagman) are preserved, but otherwise – e.g. where data are set out in tables and figures in the body of a chapter – the items are retranscribed to reflect contemporary standard orthographies or else the conventions reflected in current dictionaries. In addition, specifically in the context of the Main comparative tables presented at the end of chapters IV, V and VI, the



representations are furthermore artificially ‘harmonized’ - i.e. adjusted in a few minor ways - for greater ease of phonetic comparison.

Adjustments of the latter kind mainly involve conventions for the indication of nasalized vowels, and the orthographic or standard representations of certain click ‘accompaniments’. In particular, although several orthographies use the apostrophe to symbolize a glottalized click, all instances of this accompaniment have been retranscribed (in the Main tables) with a superscript glottal stop symbol. The ejective accompaniments, on the other hand, are symbolized by the conventional IPA apostrophe - except in a few cases where the original data are shown with a glottal stop, which it seems wiser to preserve. As a general principle, it is methodologically dubious to attempt a mechanical reversion of orthographic representations back into phonetic ones. The few changes described above are only permissible because the equivalences involved are clearcut.

The following brief notes supplement the information given in the mini-table above.

**KHOE:** Khoekhoe sub-branch.

The name ‘Khoekhoegowab’ is the official language name (cf. discussion in Haake 1999: 2) used in Namibia today for such dialects as Nama [N], Damara [D], Namidama [Namid], the Sesfontein dialects [S], Haillom [Hm], †Aonîn (‘Topnaar’) [T], †Akhoe [†A] and †Aodama [†D]. It would naturally be preferable in the context of this English-medium text to use the name, ‘Khoekhoe’, but since this is also the superordinate term for a branch of KHOE, the non-Anglicized name will be used for Namibian Khoekhoe (unless the context leaves no room for confusion). Where no specific indication is given, the variety is Nama.

Words appearing in the Main comparative tables that follow Chapters IV, V and VI are cited in the tonally annotated form given by Haacke and Eiseb (2002), but with an orthographic version alongside in square brackets, and morpheme division usually added by means of (non-standard) hyphenation. The gender of nouns will be self-evident from their suffixes. (In the case of animate nouns, the assignment of gender will naturally be context-sensitive, and such nouns may be left unspecified in citation.)

In the interest of facilitating comparison – but only in the context of the Main tables - three slight adjustments are made (in accordance with Haacke and Eiseb 2002: v), as follows:

- i. Where the standard orthography uses a plain click symbol, this will be retranscribed with an inserted glottal stop symbol, to indicate the glottalized release.

!a > !ʔa

It is worth bearing in mind, however, that - more generally speaking - notation of this kind should not necessarily be taken to indicate an actual glottal plosive. Bonny Sands reports (pers. comm.) that ‘there is not always a glottal plosive here in all [Khoesan] languages. There is always a silent, unaspirated period, however, in clicks transcribed this way.’

- ii. Where the standard orthography for Khoekhoe *includes* a ‘g’ written after a click, this is omitted in retranscriptions - to indicate that the click is the so-called ‘basic’ type ‘followed by an inaudible voiceless velar plosive’ (Haacke and Eiseb 2002: v), and not (as might be thought) a voiced click:

!ga > !a

- iii. Where the standard orthography represents an aspirated click merely by means of a following ‘h’, this is rewritten so as to underscore the point made by Haacke and Eiseb that the click is in fact ‘followed by a delayed glottal fricative’:

!h > !ʔh.

It may also be noted that the Khoekhoe accompaniment type ‘kh’ used in the orthography represents ‘a voiceless velar fricative or affricate’, i.e. [!x<sup>h</sup>] or [!kx] (Haacke and Eiseb 2002: v).

Examples from !Ora (or ‘Korana’) are occasionally also supplied, but this is mainly for informational purposes, since there is not a sufficiently consistent body of counterpart vocabulary for it to be useful in constructing comparative series.

The comparative tables include the reconstructed forms proposed by Vossen (1997) for KHOE and its sub-branches, where such are available. The tilde superimposed above clicks in Vossen's reconstructions indicates a nasalized click; while the subscript tilde indicates a voiced click.

**KHOE:** Kalahari sub-branch.

The Naro words in the original source (Visser 2001) are given in a Romanized orthography. In citations in the Main tables, the symbols have been transliterated into the IPA symbols, to facilitate comparison.

The examples for the second western Kalahari language are sourced from Kilian-Hatz's *Khwe Dictionary*, and the spelling 'Khwe' is therefore retained for the sake of consistency in the tables. It is noted, however, that speakers themselves have indicated a preference for their language name to be spelled 'Kxoe' (cf. Miller, Brugman, Sands et al. 2009).

**JU and !UI-TAA.**

For languages of the JU and !UI-TAA groups, it needs to be kept in mind that each appears to have a small subset of nouns that take suppletive plurals. The suppletive (or irregular) plurals of these nouns (often personal, but sometimes terms for parts of the body) are provided in the tables, where known. Honken has suggested (1977) that a set of irregular plural forms in Eastern #Hoan – all terms for parts of the body – 'seem to result from an old suffix which has merged with the base'.

These languages may also have suppletive forms for a small subset of verbs (often of the kind typically enlisted for grammatical purposes, such as venitives, itives and postural verbs). The suppletive forms are shown in the tables. It is of incidental interest that Dempwolff (1916: 20) noted the presence of a similarly suppletive verbal set in Sandawe. These are discussed in the context of Sandawe's more general system of verb-based plural expression by Kiessling (2002), who notes that:

‘a considerable number of basic intransitive verbs of locomotion and spatial positioning [...] and some basic verbs of manipulation [...] have suppletive stems that alternate for singular and plural. [...] Their distribution is determined by the same morphosyntactic conditions as the morphologically derived plural stems, that is with intransitive verbs, the suppletive plural stem indicates subject plurality, whereas with transitive verbs it generally indicates object plurality’.

This is exactly the situation that obtains in Ju|’hoan.

## **JU.**

The language represented in the comparative Tables is the ‘Southern’ JU variety, Ju|’hoan. Although the default source is Dickens (1994), corresponding forms may be given in the original forms supplied by Snyman (1975), since the earlier representations are sometimes more transparent. The velar ejective accompaniment shown in Dickens by a following ‘k’ is rewritten more explicitly for purposes of citation in the Main tables, as shown:

!k > !kx’.

An alternation has long been known to exist between the postalveolar click [!] and the alveolar lateral click [l] across varieties of JU (e.g. Westphal 1974; Snyman 1980, 1997).

Where this factor comes into play in the comparative series, information concerning Central and Northern varieties of !Xung sourced from Snyman (1997) is also provided. Snyman also records an occasional JU-internal alternation featuring [!] and the palatoalveolar click [ʃ], and this is similarly indicated where it arises, and acknowledged by means of the code ‘JS-JUint’.

## **!UI-TAA = TUU.**

The unity of these two branches has been proposed by Güldemann (2004c), who suggests the name TUU (2004b) for the integrated group. Some of the comparative series put forward by him for TUU may be represented partially and indirectly in the tables at the end of this work: they are acknowledged in a corresponding note by the code ‘TG-TUU’.

Güldemann has proposed tentative reconstructions for some of these items, but emphasizes their preliminary nature.

**TAA: !Xóǀ**

Like other languages within the general grouping of JU and !UI-TAA, !Xóǀ has several verbs that may take suppletive (or at least phonologically variant) plural forms; while adjectives (possibly because many adjectival constructions are syntactically ‘verbal’, as will be discussed later, cf Ch. V.3.i.) may similarly have variant plural forms. Traill (1994) uses a number of symbols as a shorthand device to cover the range of ‘concordially determined allomorphs’, as follows:

**Fig. I.12.** Symbols used by Traill (1994: 28) to express morphophonemically variable forms in !Xóǀ, showing realizations for each concordial sub-class.

Cover symbol	Agreement sub-class 1	Agreement sub-class 2	Agreement sub-class 3	Agreement sub-class 4	Agreement sub-class 5
V	i	ǎ	e	u	an
BV	bi	ma, mā	be	bu	m
LV	li	na, nǎ	le	lu	n
JV	ji	ǀna, ǀnǎ	je	ju	n

Another aspect of Traill’s notation that may need explanation is his representation of some of the non-click consonants. Aspiration, whether of a plosive or affricate, is indicated conventionally by a following ‘h’ (e.g. ‘th’, ‘tsh’, ‘kh’ or ‘qh’). Voiced aspirates are represented by the symbols for the aspirates plus pre-placement of the appropriate symbol for a voiced segment (e.g. ‘dth’, ‘dtsh’, ‘gkh’, or ‘Gqh’). Traill notes (1994: 38) that in the case of the latter, ‘there is voice lead followed by a voiceless aspirated stop’.

**!UI: |Xam.**

The !UI sub-branch is undoubtedly best-represented, in terms of the extensiveness of its records, by |Xam. While Bleek and Lloyd (primarily the latter) worked with only six consultants - and just three of them in the main - these speakers had the advantage, nonetheless, that they were members of speech communities who still used the language

with fluency. It cannot be disputed that the quality of the phonetic transcriptions may be faulty; yet Lloyd plainly attempted to provide a faithful transcription, to the extent that she marked distinctions of tone in almost every word. Lloyd used a cedilla below vowels to indicate ‘a rough, deep pronunciation’ (Bleek and Lloyd 2001 [1911]: viii) that was probably pharyngealization. This is transliterated here by means of a superscript ‘q’, as in !gwa<sup>q</sup>-xu ‘sky’. Concerning Lloyd’s annotation of ‘accompaniments’, Traill (1995) has determined that her use of a following letter ‘k’ almost certainly represented the ‘plain’ click, i.e. the click characterized by inaudible velar (i.e. posterior) release; while her ‘plain’ click symbol represented a ‘glottal stop accompaniment’ (as in the convention used for modern Khoekhoe). In other words:

Lloyd’s !k	=	!
Lloyd’s !	=	!?

Because of the separate methodological imperative to preserve the integrity of archival evidence, these minor transcriptional aberrations have *not* been retrospectively ‘corrected’ here in any citations of words from Bleek and Lloyd’s *Specimens of Bushman Folklore* (2001[1911]), hereafter referred to as *Specimens*.

Some further uncertainty has been created by two of the symbols used by Bleek and Lloyd, namely a character resembling the Hebrew *ayin*, and a type of ‘double breve’. The former is typically seen as a stem-initial feature, and was said (*Specimens*: viii) to indicate ‘a strong croaking sound in the throat’. The following examples are from texts in Bleek and Lloyd’s *Specimens*:

‘ayin’ (ʼ)	nú/ ǒ	‘old man’	[p. 317]
	ʼao <sup>q</sup>	‘cold, winter’	[p. 317]

In her *Bushman Dictionary*, hereafter referred to as *Dictionary*, Dorothea Bleek transliterated the ‘ayin’ by means of a letter ‘k’ with double apostrophe (i.e. ‘k’’’), noting (1956: 117) that the sound in question was not simply to be equated with the ejected velar affricate [kx’]:

‘It is certainly not k with the glottal stop, nor is it kx?. It is more. The throat is closed by pressing the back of the tongue against the epiglottis, then suddenly opened creating a croak, an ejective k”, but with hardly any air behind it.’

The second symbol (a ‘double breve’, difficult to reproduce here) was intended (*Specimens*: viii) to indicate ‘a gentle croaking sound in the throat’, and typically appears as a click accompaniment, as in the following examples:

‘Double breve’ (˘)	˘kǎ- ˘kǎ	‘hands’ [reduplicated pl.]	[p. 38]
	ll˘koen	‘see’	[p. 114]

For purposes of citation, the two improvised symbols used above will be employed (unless the source is the later *Dictionary*, where Bleek’s transliteration (k”) for the ‘ayin’ will be used). Sources are indicated as ‘[Xam’ for words sourced directly from the *Specimens*; ‘S1’ for words from Bleek’s *Comparative Vocabularies of Bushman Languages* (1929); and SI for words from the *Dictionary* (1956).

It is to be noted that morpheme division may not always be clearly or accurately indicated in archival material for the !UI varieties. In the case of the JU language, Ju|’hoan, it was noted by Snyman (1970: 128) that verbs may assume a ‘terminal –a’ (with predictable variants involving interpolation of a glide between the stem and the particle). Various distinct functions (and tonal forms) of this ‘transitional’ morpheme have since been identified (Dickens 1997), including an association with transitivity. It seems likely that archival representations of !UI verbs with terminations such as –wa or –ya may be reflective of similar morphemes.

Material recorded by Dorothea Bleek (ed. Güldemann 2000) ‘between 1911 and 1915’ (cf. Bleek 1929) for a very closely related variety spoken by the ||ŋ !ke (S2, or SIa) may be offered as an occasional supplement, but for informational purposes only. Material from Meinhof’s record (1928-9) of †Uŋkwe may occasionally also be supplied on the same basis.

**!UI: #Khomani, N|uu.**

The recognition in 1996 that a small number of the #Khomani elders still retained some knowledge of their language (Sands, Miller and Brugman 2007) has led to the emergency undertaking of various documentation projects. The international scholars involved in this work have begun to present intermediate findings of their research on the language (renamed N|uu), but it will be some time before publication takes place of the dictionary, texts and grammar currently in various stages of progress. Supplementary reference will occasionally be made to this new data where it is readily available in published format. It is noted, however, that only about 1450 words have so far proved retrievable from these elderly rememberers (Sands, Miller and Brugman 2007).

### **I.5. The narrow perspective: points of difference between KHOE and the remaining SAK languages.**

This section provides a short initial statement of typological respects in which the SAK languages differ (i.e. in an ‘immediate’ or ‘local’ sense) from one another. (Some of these differences will be illustrated and discussed in more detail in a subsequent chapter, as part of the review.) The present chapter ends with a summary of more general properties shared by the SAK languages, not only with each other, but also with other African languages more widely.

#### I.5.i. Preferred patterns of constituent sequence.

The KHOE languages favour ‘head final’ patterns (cf. Güldemann 1999). Within the main clause the verb appears in final slot [SOV]; in the prepositional phrase the locative morpheme appears at the end of the constituent; and in the noun phrase the noun (usually) follows its specifiers.

In languages of JU and !UI-TAA, the preferred clausal pattern is ‘verb-medial’ [SVO]; while the noun appears at the beginning of the phrase it dominates, with specifiers following. (Such differences in the preferred sequencing of constituents naturally do not preclude relationship, or else English could not be related to German.)



### I.5.ii. Grammatical genders.

As it is used in this work, the concept of ‘gender’ is the one established by scholars such as Greenberg, who also applied it to the Bantu system (1990 [1978]); and Corbett (1991). It therefore refers to the sub-classification of nouns in terms of various semantic features, which may or may not include natural gender, and where patterns of agreement co-varying across parameters of number or case provide an associated morphological expression of the classificatory distinctions. (The paired singular-plural ‘noun classes’ of the Bantu languages constitute genders within this broader theoretical framework, while the noun classes constitute ‘concordial sub-classes’.)

All SAK languages feature gender systems (i.e. formally reflected subcategorization of nouns). In the case of the KHOE languages, however, the two main genders are aligned with distinctions of natural gender (i.e. masculine and feminine), and there is also a common gender. The genders in KHOE languages, particularly of the Khoekhoe branch, are of the overtly indexed type, being reflected in covarying singular and plural suffixes. The relevant morphemes have the typical behaviour of dependent pronominal affixes in that they are also used for cross-referencing, and may in some varieties be combined with bases to form selfstanding pronouns.

The KHOE languages also typically make distinctions of natural gender in the 1<sup>st</sup> and 2<sup>nd</sup> (or ‘interlocutive’) persons. The morphology invoked here is unrelated, however, to the morphemes associated with gender in the 3<sup>rd</sup> person (much as may be seen also in some Afroasiatic languages, such as Egyptian).

In the remaining groups (JU-TUU), some languages preserve systems of multiple grammatical genders, while others (particularly in !UI) manifest reduced or reorganized systems where only concord based on animacy is now reflected. The genders in these languages are largely covert, being reflected only in differentiated pronominal agreements. Many languages nonetheless retain associated vestiges of covarying singular and plural morphology. Although this morphology is mostly suffixal, several languages in !UI-TAA preserve remnants of a former prefixing system.

In the case of Ju|’hoan, Snyman assigned an arbitrary number to each *gender*; while for !Xóǀ, Traill gave an individual number instead to each concordial *sub-class* (much along

the lines of the system in which the Bantu nouns are divided into ‘noun-classes’ on the basis of the agreements they participate in). These two conflicting systems are shown in the figures below.

**Fig I.13.** Pronominally defined genders in Ju|’hoan, after Snyman (1970) and Dickens (2005).

Gender label after Dickens (2005)	Gender label after Snyman (1970)	Semantic category	Abs.		Poss.		Dem.		
			Sing	Pl.	Sing.	Pl.	Sing./Pl.	Prox.	Dist. 1
I	(i)a	<human>	ha	si	ma	hisi	he	to’a	uu.to’a
II	(i)b	<animal>	ha	hi	ma	hisi	he	to’a	uu.to’a
III	(i)c	<thing>, <plant>	ha	ha	ma	masi	he	to’a	uu.to’a
IV	(i)d	<long >	hi	hi	hi	hisi	he	to’a	uu.to’a
V	(ii)	<part of body>, <plant>, <thing>	ka	ka	ga	gasi	ke	to’a	uu.to’a

**Fig. I.13.** The five concordial (i.e. agreement) sub-classes in !Xóǀ, after Traill (1985, 1994).

Concordial sub-class	Identifiable nominal suffixes:	Concord	Intra-sentential pronouns
1	-li, -i	-i	ìh
2	-ã, -ma, -n -na	-ã	ǎh
3	-le, -e, -je, -be	-e	èh
4	-lu, -bu, -u	-u	ùh
5	-	-n	ń

Examples of the full pronominal systems for selected KHOE, JU and !UI-TAA languages are provided in the figure [overleaf]. (The singular-plural pronominal pairings shown for the third person are of course reflective of genders.) In the comparative tables that will be

!khoe KHOE: !Ora, after Meinhof (1930: 43)

	Singular	Dual	Plural
on			
x.-<masc.>	ti-re	si-kha-m	si-the
n.>	ti-ta	si-sa-m	si-se
mm.>	-	si-m	si-da
n.-<masc.>	-	sa-kha-m	(?) sa-the
m.>	-	sa-sa-m	(?) sa-se
mm.>	-	sa-m	(?) sa-da
.-<masc.>	sa-ts	sa-kha-ro	
m.>	sa-s	sa-sa-ro	sa-sao
mm.>	-	sa-kha-o	sa-du
<masc.>	ll'ai-b	ll'ai-kha-ra	ll'ai-ku-a
em.>	ll'ai-s	ll'ai-sa-ra	ll'ai-de
omm.>	ll'ai-i	ll'ai-kha	ll'ai-na

Kalahari KHOE: Naro, after Barnard (1985: 16)

Person	Singular	Dual	Plural
1 <sup>st</sup> -<masc.>	-	si-tsám	si-lláé
-<fem.>	-	si-sám	si-sé
-<comm.>	(ti)ra~(sí)ra	si-khám	si-tá
2 <sup>nd</sup> -<masc.>	(tsá)tsí	sa(~xa)tsáo	sa-lláo
-<fem.>	(sá)sí	sa(~xa)sáo	sa-sáo
-<comm.>	-	sa(~xa)kháo	sa-tú
3 <sup>rd</sup> -<masc.>	xa-bá [Poss. xa-m]	xa-tsára	xa-llú
-<fem.>	xa-sá [Poss. xa-s]	xa-sára	xa-dzí
-<comm.>	'i-xa	xa-khárá xa-ná	

!Jul'hoan, after Dickens (2005: 23-24, 31-34)

Person	Singular	'Dual'	Plural
Ex.	-	è-tsá	è(!á)
In.	mí	m-tsá	m(!á)
<human>	à	i-tsá	i(!á)
<animal>, <nation>	ha	sá	si(!á)
<plant>, <thing>	ha	hi tsán	hi
<part>, <plant>, <thing>	ka	ka tsán	ka
<long>	hi	hi tsán	hi

TAA: !Xóǀ, after Traill (1994: scattered)

Person	Singular	'Dual'	Plural
1 <sup>st</sup>	ñ ('ñ), ñ dē	‡nā ē	ĩh ('ĩ), 'isĩ
2 <sup>nd</sup>	āh ('a)	‡nūm	ūh ('ū)
3 <sup>rd</sup> -<human>	èh('è)		ùh
-<part>, <animal>, <nation>	āh		āh
-<animal>, <thing>	èh		āh
-<animal>, <plant>, <mass>	èh		èh
-<plant>, <animal>, <long>	ìh		ùh
-<thing>	(ń)		ń)

Eastern #HOAN: E. #Hoan, after Traill (1974a), Collins (1998)

Person	Singular	(Dual)	Plural
1 <sup>st</sup>	ma-	?	!ā'ē- (qa''a)
2 <sup>nd</sup>	bu-	?	dži-
3 <sup>rd</sup>	ja- (īa-)	?	tsi- (ci)

!UI: |Xam, after D. Bleek (1929-30)

Person	Singular	(Dual)	Plural
1 <sup>st</sup> Ex.	ŋ	?	si
1 <sup>st</sup> In.	-		i
2 <sup>nd</sup>	a		u
3 <sup>rd</sup> -<animate?>	ha		hi
-?	hi		hi

... follows p.34

presented at the end of this work, nouns in Ju|'hoan and !Xóǀ are presented together with information concerning gender, i.e. in the sense of the specific singular-plural pronominal pairings they participate in. In the interest of transparency and so as to facilitate comparison, the gender indication is by means of paired pronominal indices, e.g. *ha/ha* for Ju|'hoan, or *ǎh/ǎh* for !Xóǀ.

The reason for including this information is that prefixed morphology formerly associated with the indexing of genders, but for the most part no longer now visible, may have been responsible for certain stem-initial morphophonological outcomes. For the present it is merely noted that the pronominal indicators are, however, almost certainly only a reduced manifestation of the original system. This is suggested by the fact that within the pronominally expressed genders of both !Xóǀ (TAA) and |Xam (!UI) a number of clear subsets can be identified on the basis of particular pairings of singular-plural noun-terminal morphology, where there is occasionally even a discernible association with a semantic subcategory.

#### I.5.iii. Number.

The number system of the KHOE languages includes a formally expressed dual, where the relevant morphology is differentiated for masculine, feminine and common genders. The pronoun systems of KHOE languages can indeed give the impression of great complexity: this is because the pronouns of the 1<sup>st</sup> and 2<sup>nd</sup> (i.e. 'interlocutive') persons may also distinguish inclusive versus reference (specifically in languages of the Khoekhoe branch); while in all three 'persons' there is separate morphology to express each value for number (singular, dual or plural) as these covary across the parameter of gender.

The JU-TUU languages do not lack the means of expressing an optional 'dual' when required, as noted, for example, in an early sketch by Vedder (1910-11) of !Xung. These languages typically distinguish between inclusive and exclusive reference.

**I.6. The wider perspective: properties the SAK languages have in common not only with each other but with other languages of the continent.**

Much of the discussion above has tended to focus narrowly on those typological respects in which the SAK languages differ from one another. From a wider perspective there are a number of other properties that they have in common - not only with each other, but also with many other languages of the continent. Some of the typological characteristics SAK languages jointly share with other families of Africa include the use of denominative locative expressions; the use of derivational morphology with meanings such as 'master-of', 'owner-of' or 'father-of'; and the use of 'ideophones'. Properties shared by the JU and !UI-TAA languages with not only sub-Congo members of Niger-Congo (such as the Bantu languages) but also languages of Nilo-Saharan include the use of derivational morphemes that seemingly arise from terms such as those for 'child' and 'woman', and which are used in the formation of nouns with diminutive and feminine meanings. Morphemes of this kind in southern African Khoesan occasionally even bear a notable formal resemblance to those of both Niger-Congo and Nilo-Saharan.

## **CHAPTER II. Methodology, and a few other preliminaries.**

### **Chapter synopsis.**

The main elements of the methodology used in this work are set out, so as to provide the contextualizing backdrop for the review in the following chapter (of the few comparative studies and related analysis previously undertaken). The demonstration of relatedness will involve a classical two stage process: the first stage will show structural affinities that establish the grounds for a working hypothesis of unity; and the second will attempt to offer corroboration by (a) demonstrating repeating patterns of phonetic alternations, and (b) showing the feasibility of projecting hypothetical common structures.

These notes are followed by a section that anticipates the counter-proposal of a borrowing scenario. The section is needed in order to address an approach prevalent in the field of Khoesan linguistics, currently dominated by ‘Splitters’.

### **II.1. The classical method of demonstrating language relatedness.**

Johanna Nichols has pointed out (1996) that the classical demonstrations of language relationships generally took underlying genetic unity as axiomatic. The determination of regular sound correspondences was essentially the second step, i.e. one that permitted the work of ‘reconstruction’, and that ultimately provided more detailed specification of the finer branchings (or sub-systems) within the already assumed kin-group:

‘The procedure employed by the classic comparative method may be summarized as follows. An initial assumption of relatedness is made on the basis of solid evidence that firmly identifies a unique individual protolanguage; that evidence is primarily grammatical and includes morphological material with complex paradigmatic and syntagmatic organization. The initial assumption of relatedness is made for some, though not necessarily all, daughter languages. Once relatedness is assumed, then the labor-intensive process of working out the correspondences and cognate sets begins. Since relatedness is assumed, this lexical work makes the further assumption that any vocabulary set displaying the regular sound correspondences is in fact cognate, however far-fetched the semantic correspondences. This work ultimately yields a detailed picture of the branching structure of the family tree, and it often brings into the family additional languages

that did not figure in the initial assumption of relatedness. It also yields additional individual-identifying evidence for the relatedness of the daughter languages.’

Nichols emphasizes that the initial assumptions were generally based either explicitly or implicitly on observations of similarities between grammatical paradigms in the main, although sometimes in combination with the existence of similar lexis (as well as tacit notions concerning the ethnic relatedness of speaker communities). In short, while the full-scale demonstration of cognate (lexical) sets may serve to *corroborate* genetic relationship, it is not in itself the initial ‘discovery device’ or heuristic.

It follows that where a potential relatedness of languages is not sufficiently self-evident to be taken for granted, it is necessary to use some sort of diagnostic technique. Nichols suggests that such a technique should primarily involve a search for syntactically based parallels, i.e. ‘submerged features’, that involve not merely occasional morphological correspondences, but actual paradigmaticity. She adds that this search may take differing forms, depending on the differing properties of languages:

‘Languages of the isolating type, and to a lesser extent languages with agglutinative morphology, lack the intersecting arbitrary classifications and grammatical accidents that make subsystems like the Indo-European gender system diagnostic of genetic relatedness. Nonetheless, there are various circumstances under which groupings and reconstructions of isolating languages may be said to be consistent with the comparative method. One such situation is where the family is sufficiently shallow that relatedness is self-evident (e.g. Tai, Chinese) or has a written history that makes its relatedness evident (Chinese). Sometimes an isolating group fits into a deeper family that has more morphology and whose relatedness has been established in part on the evidence of that morphology, as Chinese fits into Sino-Tibetan or Vietnamese into Austro-Asiatic or Kwa in Niger-Congo. In principle, genetic relatedness could even be established on purely lexical evidence. If lexemes can be organized into paradigmatic sets and the entire set reconstructed [...], then it may be possible to regard the sets as internally structured pieces of individual-identifying evidence.’

In the case of the present study, the argumentation will have the following format:

STAGE I. It will be shown in the two chapters of the first ('grounds establishing') stage (i.e. Ch. IV pts 1-3, and Ch. V) that there are structural affinities visible across the SAK languages. These occur as:

(1) Resemblances in the morphology of those *verbs most frequently enlisted for grammatical purposes*, i.e. in the context of multi-verb constructions associated with the expression of modality, tense and aspect, as well as various locative and directional relations; and

(2) Resemblances noted 'horizontally' across the *specifier systems* of SAK languages, where the resemblances in actual morphology are also visible 'vertically', i.e. down the lists of possible exponents within the relevant sub-paradigms (e.g. deictic, quantificational or descriptive).

While the discovery procedures for other groupings (such as Indo-European) have included notable reference in the first stage to structural commonalities detected in the pronominal systems of the potential member languages, this specific sub-system is not always in itself a useful (or necessary) indicator. In languages where the morphological expression of certain kinds of grammatical information (such as semantic roles) is not nominally based (i.e. expressed by means of case inflection) there may simply be too little in the way of pronominally-based morphology to work with. This appears to be the situation that obtains, for example, in a number of African languages, such as members of Niger-Congo, where the indication of semantic roles in some languages may be at least partly a verb-based function; and this seems to be the situation also in southern African Khoesan.

It is also noted that the demonstration of actual correspondences does not fall within the scope of the first stage. It is a mild paradox of the method that the limited sets of items shown to be similar in the first stage do not generally provide sufficient material on which to base firmer claims concerning the presence of actually systematic correspondences. The first stage only licenses the next, in which the wider vocabularies of the languages under comparison can then be searched more extensively for words with (unstrained) semantic links that are potentially cognate - even where these will not necessarily present themselves as obvious cross-varietal lookalikes. (It is not desirable to rule out items from the start purely on grounds that they do not meet pre-formed ideas concerning what may or may not be valid correspondences.)



To sum up: the presence of multiple structural commonalities constitutes fair grounds only for raising the *possibility* of SAK-unity, i.e. as a working proposal. The method of *testing* such an hypothesis is to embark next on a search for signs of a common underlying system, such as might be expected to manifest itself in regularly repeated phonetic alternations (i.e. patterns where a segment *x* in one language consistently appears as the counterpart, in a semantically equivalent morpheme, to some segment *y*, and where departures from such a pattern can potentially be shown to be systematic).

STAGE II. In the second ('confirmatory') stage (Ch. VI), cross-SAK lexical material is set out in comparative series (or 'rows'), organized into conventional arrays. This tabulated material reveals a range of recurring co-variations of phonetic elements in items that are plausibly equivalent in semantic terms. In several instances the patterns will be seen to confirm the hypothesized cognacy of the resemblant structural items noted in the first stage. It is conceded, however, that the tables primarily demonstrate regular patterns involving only the basic click *positional* type. Additional tables highlight regularities involving clicks that are fully characterized (e.g. as voiced, aspirated, or ejected).

Lastly, tentative preliminary suggestions are put forward (in an Appendix to Ch. VI) concerning certain of the properties that a common 'ancestral language' might have had, along the following lines:

- i. The model hypothesizes the probable shape of the original basic stem pattern.
- ii. It presents an example case of an underlier that could be projected to account for one of the alternation patterns seen in the comparative tables; and shows how the proposed stem pattern can account for some of the diverse click accompaniments, as well as the 'quirky' alternations they participate in.

Any model of this kind should in principle be guided by various rules-of-thumb, in order to meet certain norms of well-formedness. Its projected inventory of proto-segments should preferably not include rare segments, i.e. it should not violate the 'Oddity Constraint' of Roger Lass (1993)<sup>1</sup>. While symmetry is by no means an absolute requirement, it is at least a desirable quality (cf. Campbell 2004: 145). The model should therefore ideally not contain segments characterized by features with an uneven distribution through the overall inventory; and nor should it feature unusual gaps, if possible. The overall size of the projected inventory should generally be parsimonious. Lastly, the theoretical dynamics proposed to account for the emergence of the various reflexes in various contexts should

involve linguistically plausible routes, i.e. they should be at least ‘quasi-realistic’, or in accordance with known universals of language behaviour.

The model that is proposed in the Appendix will be seen to display economy, insofar as it permits projection of a simple and moderately sized proto-inventory, without unusual segments or extensively characterized ones. It also has additional explanatory power, in that some of the processes needed to account for the emergence of clicks from these underliers offer a natural explanation for the Back Vowel Constraint.

## **II.2. Anticipating the potential counter-hypothesis that structural affinities may be attributable to areal diffusion.**

### II.2.i. Introduction.

It might alternatively be proposed that the structural resemblances noted in the first stage of the work are merely attributable to extensive processes of areal diffusion. To raise the possibility of this counter-argument simply in order to set about refuting it is not the idle propping up of a ‘straw-man’: the field of Khoesan linguistics is currently dominated by scholars who admit to being ‘splitters’, as remarked by Güldemann and Vossen (2000), and who are perhaps more likely than not to choose convergence as the first-case explanatory scenario when cross-SAK structural affinities are found. This is the approach, for example, of Güldemann (2003) and Sands (2001).

#### *Summary of the refutation:*

Hypotheses of the ‘diffusionist’ kind will be shown in the discussion that follows to be methodologically faulty. While it is not denied that borrowing has undoubtedly occurred in many cases, to propose that extensive cross-linguistic similarities have come about *entirely* by processes of convergence is to make a strong claim that not only requires (i) testing, but also requires (ii) motivation of its underlying premise – i.e. of absolute prior difference. When it comes to designing a test for such an hypothesis, the weakness of the approach immediately becomes apparent. As for motivating the prior assumption of an absolute dichotomy, the evidence may be of two kinds: non-linguistic and linguistic. The non-linguistic evidence is

inadmissible. The linguistic evidence takes the form of two main arguments: one for the existence of typological differences that suggest existence of a major ‘SAK-internal split’; and one for various hypotheses of a ‘northern link’, where the KHOE languages are placed in relationship with one or more languages elsewhere in Africa, and hence are effectively split off from the other SAK languages. (The linguistically-based arguments will be discussed separately, as part of the literature survey.)

#### II.2.ii. The fact of borrowing.

Of course borrowing can and does occur as a general phenomenon, and certainly has occurred in the case of the SAK languages - no less than in any others. There are many fairly obvious loans in Khoesan languages from various Bantu languages (and even Afrikaans) that plainly reveal the operation of such processes; and it would be surprising if inter-Khoesan borrowing also had not taken place, especially given the complexity of recorded social dynamics, particularly during the recent colonial period. As it happens, languages from non-Khoe groupings of the Kalahari region (such as Ju|’hoan, Eastern ǀHoan and !Xóǀ) are indeed particularly prone to a presence of words almost identical to those found in varieties of Kalahari Khoe (such as Naro).

Sands (2001) expands on the issue of borrowing, noting that ‘Khoekhoe dialects have influenced nearly every other Khoesan language’. This influence has ‘led to unidirectional borrowing from Khoekhoe, and language replacement, in some cases.’ The mini-table below, showing the directional tendency of this influence, is based partly on references and information in Sands’ paper, although the suggestion of a !Ora influence in ǀUṅkwe was made by Meinhof (1928-9).

**Fig. II.1.** Direction of influence in the context of areal diffusion affecting SAK languages, after Sands (2001).

KHOE	KHOE	JU		'TUU'	'TUU'
Khoekhoe	Kalahari		(isolate)	TAA	!UI
Khoekhoegowab →		- Ju 'hoan		- !Xóǀ	-   Xegwi; -  'Auo (bilingualism); - #Khomani (bilingualism)
!Ora (?) →					-  Xam; - #Uŋkwe
	Khwe (?) →	- Ju 'hoan (Dikundu)			
	Naro →	- Ju 'hoan (Tsumkwe)		- !Xóǀ (bilingualism)	
	Gui →		- E.#Hoan (bilingualism)	- !Xóǀ	

Sands sums up her paper on 'Borrowing and diffusion as a source of lexical similarities in Khoesan' as follows:

'the widespread occurrence of a root in a given language family should not be taken as conclusive evidence that the root was inherited rather than borrowed or diffused from another language family, as we can expect multiple points of contact between Khoesan families.'

This is fair comment: the mere fact that certain similar-looking and semantically equivalent items may have a partial or even a near-complete cross-group distribution does indeed not mean that they are automatically *cognate* terms.

In some cases, loan status may be reasonably self-evident. For example, Traill and Nakagawa (2000) discuss the existence of a known !Xóǀ-|Gui 'contact zone', and note that for the 275 shared (and very similar items) they found, !Xóǀ frequently had an alternative (i.e. presumably native) term of its own. Otherwise, unless their foreign origin is a matter of record, the status of particular words as non-inherited is generally best established by

linguistic procedures, e.g. by determining that their phonetic substance violates a predicted pattern of variation.

Even so, the mere fact that some natural borrowing or diffusion may have occurred across a particular set of languages still does not preclude the possibility of relatedness at a deeper level. There are ‘doublets’ seen occasionally in Jul’hoan (e.g. *n|òqm* and *g#òó* ‘springhare’) where one of the terms is a probable loan from a Kalahari Khoe variety, such as Naro (cf. *#gòó*), while the other evidently ‘native’ term is different; and yet, on the evidence of similarly patterning data, the two forms are quite probably cognate, nonetheless. (It is possible that the ‘cousin-like quality’ may have been one of the very factors facilitating the transfer of the additional word.)

Finally on this point: to suggest that extensive cross-linguistic similarities (particularly ones involving grammatical morphology) have come about *entirely* by processes of convergence, and that the languages concerned are underlyingly quite unrelated, is to make a claim of an altogether different order. Such a strong claim certainly requires testing, just as much as any proposal that structural commonalities may perhaps be accounted for by an underlying unity; and moreover even seems to require additional motivation.

### II.2.iii. The problem of testing scenarios of areal diffusion as explanatory hypotheses.

A convergence hypothesis is at a disadvantage from the outset in terms of testability, since borrowing is inevitably harder to ‘prove’ than inheritance. (This is all the more true in the case of the Khoesan languages, for which there are no records going back further than the 17<sup>th</sup> century.) It may be argued in some cases that a very limited distribution across one language group of a form otherwise widely found in (and possibly even reconstructed for) another set of languages is *suggestive* of borrowing by the first group. Yet there are well-known sociolinguistic factors that may be responsible for skewings of this kind, and such a pattern may reflect merely some ordinary regional isogloss, e.g. as the result of several languages in one group having substituted an alternative word (possibly a neologism or archaism) in place of a formerly more widespread form.

For all practical purposes, the best test for borrowed status would probably involve trying to show that any particular phonetic alternation initially suggested by a single row of potentially cognate words - is *not* borne out by systematic recurrence (i.e. throughout an

entire array of semantically linked items for the languages concerned). In effect, this is the converse of the test that needs to be applied *in any case* to verify the hypothesis of unity.

Since it seems to offer the simpler point of methodological departure, in terms of being more readily testable, the approach taken here will be that the evidence presented in the two chapters of Stage I constitutes reasonable enough ‘first-sight’ grounds for proposing an hypothesis of possible unity; and for proceeding to test the idea (in Stage II). The return of a negative finding (or ‘null hypothesis’) might *then* constitute grounds for raising areal diffusion as an alternative explanation for the cross-SAK similarities.

The mini-discussion below outlines some of the further methodological difficulties that arise when the alternative scenario of areal convergence (or ‘borrowing’) is raised as a first-case hypothesis. The conclusion that will be drawn from this discussion is that: invocation of a borrowing model as first choice of explanation violates a basic guideline of preferred simplicity.

Even before proceeding to this discussion as it pertains specifically to Khoesan languages, it may be noted that the argument has in any case already been made – and established as a general principle of the historical linguist’s method - by the metatheoretician Roger Lass, who commented (1997: 209) in his major collection of philosophical essays that:

‘... in the absence of evidence, an endogenous explanation of a phenomenon is more parsimonious, because endogenous change *must* occur in any case, whereas borrowing is never necessary. If the (informal) probability weightings of both source-types converge for a given character, then the choice goes to endogeny.’

Apart from its lack of intrinsic testability, a convergence proposal seems additionally cumbersome to start out with, since (unlike the unity hypothesis) it seems to call for some validation of its very premise, i.e. of absolute prior difference. It will be suggested below that there are few convincing grounds of either a non-linguistic or a linguistic kind for merely pre-supposing (i.e. as an unquestioned axiom) that there is a fundamental difference between the two broad groupings of the SAK languages.

#### II.2.iv. The inadmissability of non-linguistic evidence.

As concerns *non*-linguistic evidence (effectively for the existence of supposedly different speaker populations) there appears to be none that the linguist can legitimately invoke. The interpretations placed by archaeologists on the material record have tended to depend in part (and sometimes even crucially) on appeals to ‘linguistic’ (i.e. lexical) evidence in the first place - which is believed to support the making of some connection between a specific set of cultural traces (or ‘signature’) and a distinct population. In particular, the presence of certain terms for domesticated animals (particularly sheep) in the KHOE languages but not JU and !UI-TAA has sometimes in the past been suggested (cf. Westphal 1963 for an early formulation) as evidence for the arrival of KHOE speakers at a time roughly coincident with the first (known) deposition of remains indicating the presence of the relevant species in the region, about 2000 years ago.

This reasoning can be faulted on several grounds. Firstly, the ‘Khoesan origin’ of some of the relevant terms increasingly seems doubtful<sup>2</sup>, which means it is more probable that the subgroup of KHOE speakers who became herders acquired their livestock and techniques of pastoralism from others, presumably via early exchange networks. More nuanced views allowing for a ‘percolation’ of this kind have in recent years been put forward by archaeologists themselves, e.g. Sadr (2003) and Fauvelle-Aymar (2008), who now question the ‘Khoisan hypothesis’ on independent grounds.

Secondly, it is to deny the intrinsic possibilities of human progress, innovation, exchange and dissemination if it is assumed that material evidence of emerging new economies, newly adopted domesticated species, and even changing technologies must always imply the literal arrival of more advanced immigrant bearer populations (whether these are conceived, in the southern African context, to have been speakers of either KHOE or Bantu languages).

Thirdly, it cannot be taken as a foregone conclusion, even if there *were* any such adventive groups, that incoming communities would necessarily have spoken languages entirely unrelated to those of any supposedly ‘autochthonous’ local populations. (Speakers of early Germanic languages are known to have intruded at various relatively late stages into regions already occupied by established speakers of Celtic languages, both on the European mainland and on the adjacent western islands: but the historical fact of these

population movements, and even a visible amount of mutual cross-cultural and cross-varietal influence, does not ‘undo’ the separate fact that the Germanic and Celtic languages are underlyingly related. Needless to say, any physiological differences that might be supposed to distinguish populations such as these have no bearing on the question of linguistic affinity.)

To sum up: the essential point concerning extraneous evidence is that it does not constitute adequate (or even strictly independent) grounds for the linguist to assert as a ‘known’ fact that there is any absolute prior difference between *speakers* of the various groupings of southern African languages. The resort to non-linguistic evidence (whether it refers to supposedly significant differences in culture or physiology) is widely considered a dubious practice and should in any case probably be avoided as a matter of basic principle. The invalidity of drawing on ‘biological’ evidence is highlighted in a textbook (Campbell 2004: 419) of historical linguistics, where the point is neatly illustrated by the observation that:

‘The genetic make-up of speakers of Indo-European languages varies considerably; there is a large difference between speakers of the Indo-European languages in northern India and those of Iceland. Similarly, Finno-Ugric languages are spoken by the western Caucasian Finns and the eastern mongoloid Ostyaks and Voguls.’

#### II.2.v. Examining linguistic evidence that might be considered sufficient to support a premise of absolute prior difference between KHOE and the other SAK languages.

Beyond any unacceptable non-linguistic arguments for the supposed existence of some absolute difference between speaker communities associated with KHOE on one hand and the remaining SAK languages on the other, there is certainly linguistic evidence that might more properly be raised. The two main types of linguistic arguments involve:

- (1) reference to typological differences that suggest a radical ‘internal split’ of the SAK languages into distinct KHOE and ‘non-KHOE’ categories; and
- (2) postulation of various ‘northern link’ hypotheses that most often attempt to connect just the KHOE subset of languages with one or more languages from the northern part of the



continent, effectively thereby splitting the KHOE languages off from the other SAK groupings.

Although these have been raised here in the context of a methodological issue, both types of argument will be discussed as part of the following chapter, since the topics simultaneously provide an indirect opportunity for a brief survey of the relevant Khoesan literature. (The last part of the survey will be seen to touch in turn on a further aspect of methodology.)

## NOTES.

1. Lass in fact made special allowance for the inclusion of segments such as clicks that might be 'odd' in a language universal context, yet regionally 'normal'. It is one of the indirect findings of the present study that Lass's principle is a powerful rule-of-thumb that works even better when it is assumed that no exceptions should be made.

2. Westphal seems to be responsible for having instigated the modern phase of this discussion, when he picked up (1963) on earlier observations by Meinhof (1905), focusing in particular on southern words for 'sheep', 'cow', 'milk' and 'goat'.

The notion that sheep were first introduced into the southern region by incoming speakers of Khoe languages is sometimes supported by reference to the Xhosa word for 'sheep' in *igusha*, which may well be a loanword from Khoekhoe, as seems to have been first proposed by Bleek (1857), with 'rendering of the feminine gender suffix' as a fricative (Louw 1977). (The reasoning is apparently that the animals would have been transmitted along with the word to the later wave of Bantu-speaking immigrants.) It is interesting, therefore, that at least one record for Xhosa (Van der Kemp 1805: 37) reveals the use of the more regular *imbo* for 'sheep' (represented as '*inbou*'). Since it is *igusha* that is taken to reflect the Khoe contribution to the Xhosa lexicon, the implication is that southern words of the widely found type (*i*)*mbu*, *ndu* and *ngu* are probably variants of a *pre-existing* Bantu term. It is of some further interest that there is a seeming survival of this word in contemporary Xhosa – where it does not, however, specifically mean 'sheep', but rather (McLaren 1963: 88) a 'highly valued, precious thing'. In light of this it seems worth noting that Benjamin Katz (Meinhof 1930: 66) specifically translated the !Ora *gub* (used in the sense of property, or a head of livestock) into his own Afrikaans as '*iets*' (i.e. 'thing'). Whether this word is ultimately KHOE or Bantu, there certainly seem to be resonances

with the special nexus of meanings associated with words like ‘*pecus*’ or ‘*chattel*’ in European languages.

As for the Kalahari KHOE words reconstructed for ‘cow’ as \**goe* (Proto-West Kalahari) and \**be* (Proto-East Kalahari) these are now acknowledged as probable loans from outcomes of PB \*-*gòmbè*, as noted (forthc.) by Güldemann and Elderkin. While the word reconstructed for ‘milk, breastmilk’ (Vossen 1997) in Proto-KHOE is \**pi*, Nama has a unique term in *daib*. This may also be a loan: cf. the Bantu word for ‘milk’ reconstructed as \**-tái* (identified as a variant of \**-tái* ‘spittle’), with known outcomes restricted to Zones DFJL. On the other hand, the Nama word may be related in some way to a widely distributed Nilo-Saharan word meaning ‘milk’ having the general shape *lai* or *lɛi*: cf. data for the Moru-Madi languages in Tucker (1940: 350-351).

Lastly, Nama has another unusual word in the domain of pastoralist terminology - in its term for a ‘ram’, namely *baib* or *bairab*. As a verb, *bai* means ‘fight (of rams); ram, bump, butt’ (Haacke and Eiseb 2002: 19; Haacke 2008), and the variant *bairab* accordingly seems to account for itself as a regularly formed deverbal nominalization. On the other hand, words with an initial bilabial stop are remarkably rare in all SAK languages, as has been noted elsewhere, and the possibility exists that the original word is indeed foreign (with both the verb and the longer form of the noun then perhaps being explicable as later coinings and reinterpretations).

### **CHAPTER III: Literature survey Part 1: ‘Splitters’.**

Linguistic arguments previously raised to support a premise of absolute prior difference between KHOE and the other SAK languages.

#### **Chapter synopsis.**

The first part of the chapter considers various typological differences that might suggest the existence of an absolute dichotomy between the KHOE and ‘non-KHOE’ groups of SAK languages. Crosslinguistic examples are adduced to support an argument that there is not one major difference that could not coexist within an ultimately integrated framework. It may well be the case that the two groups broadly definable as KHOE and ‘non-KHOE’ are only distantly related: but there appear to be no good grounds for an absolute assertion that they cannot be related at all.

In the second part of the chapter, it is shown that there is little compelling evidence for hypotheses that propose to link just the KHOE group of languages (as a distinct set) with languages found further north in Africa, such as one or both of the east African isolates, Hadza and Sandawe. A final note explains why the Angolan isolate, Kwadi, is excluded from the study.

#### **III.1.1. The notion of a ‘SAK-internal split’.**

At first sight there do indeed appear to be a few typological grounds for supposing the existence of an absolute dichotomy between the KHOE languages and the ‘SAK remainder’. As noted in the preliminary overview, these include differences in:

i. preferred sequencing of constituents.

Moreover, when their respective pronominal paradigms are considered in full, i.e. with inclusion of the pronouns for the interlocutive persons, those of the JU and !UI-TAA languages certainly appear notably different from those of KHOE, in terms of:

ii. the actual morphology of the pronominal forms;

iii. an overall lesser morphological complexity reflected in the organization of the paradigm, insofar as the ‘non-KHOE’ languages lack a formally grammaticalized dual, and do not make grammaticalized distinctions of (natural) gender in 1<sup>st</sup> and 2<sup>nd</sup> persons; and

iv. the semantic sub-categorizations cross-indexed by the gender-sensitive pronouns of the 3<sup>rd</sup> person.

Reference is usually made to some or all of these properties in the few oblique statements that exist of what might be dubbed the hypothesis of a ‘SAK-internal split’).

In general, while such differences potentially provide useful indices for the establishment of classificatory sub-branches (since they may be interpreted as innovations) they remain merely typological, and do not preclude the possibility of an underlying unity. Just as typological similarities do not in themselves constitute ‘proof’ of linguistic relationship, so too, typological differences do not automatically signal *non*-relationship. After all, typologies are subject to change as much as any other aspect of language, as is made evident by the diversity visible across the spectrum of any existing group of languages known to be related (such as the family of the Bantu languages, or the superfamily of Indo-European). Within the SAK languages themselves, vestiges in some western !Xóõ varieties as well as various !UI languages of a formerly prefixed morphology suggest fairly strongly that processes of re-ordering, for example, must have occurred in at least some of the non-Khoe languages.

The following notes provide some abbreviated discussion of the main points of typological divergence. (Available space does not permit a lengthy treatment.) The essential theme of the notes is that there is not one set of the differences highlighted below that could not plausibly coexist within an ultimately integrated framework.

#### III.1.1.i. Differences in preferred sequencing of constituents.

An indirect exposition of the SAK-internal split hypothesis may be found in the Khoisan overview of Güldemann and Vossen (2000), where the concept takes the form of a minor motif running through the chapter. These authors comment on the difference in preferred sequencing of constituents as follows:

‘One feature distinguishing non-Khoe languages from all other Khoisan is that they have a SVO clause order and a nominal head-modifier structure with the important exception of associative constructions where the reverse order modifier-head is found.’

As already noted, a particular pattern of preferred order is not an immutable property, either of an individual language or any group of languages. (There are even some Bantu languages (cf. Nurse and Philippson 2003) with a preferred verb-final basic order.) It might be added that the Khoe languages regularly use post-verbal pronominal enclitics as a way of cross-referencing objects - in a strategy that might be interpreted as reflective of a former SVO pattern. Indeed, Haacke (2006) suggests for Khoekhoe that ‘object and object NPs in the underlying matrix sentence consist only of an enclitic PGN marker’, and proposes further that ‘Khoekhoe underlyingly is a SVO language, not a SOV language as generally held’.

### III.1.1.ii. Differences in the morphology of the pronominal forms.

It is true that much attention in the past, e.g. Greenberg (1963), Honken (1977, 1987), Güldemann (2004a), Güldemann and Elderkin (forthc.), has been placed on aspects of the pronominal systems in Khoesan languages, particularly where the range of the study has included one or both of the east African isolates. Yet there are two points that should be noted with respect to such systems.

Firstly, it is worth reiterating, as a general principle, that divergent pronominal systems are not in themselves ‘evidence’ for *non*-relatedness. Convenient reference may be made here to the vast family of the Bantu languages, across which the self-standing (or ‘absolute’) pronouns vary rather considerably. (In the course of reconstructing various grammatical elements of Bantu, Meeussen noted (1967) that when it came to the substitutive pronouns, ‘although the overall system is clear, the individual forms cannot be set up’.) This situation may have arisen because there are numerous forms in these languages with the potential to be enlisted as substitutives - in the shape of modifiers incorporating aspects of specification such as deixis, quantification, scope of reference, quality, or association. In addition, these languages not only have ‘absolute’ and other potentially self-standing pronominal forms, but also (much as in Afroasiatic) dependent pronouns of various kinds, including the morphemes commonly referred to as subject and object concords, and still other dependent (‘bound’ or ‘affix’) forms such as those used in possessive expressions. Lastly, the bases often used in the construction of the complex pronominal forms may vary from language to language.

Secondly, with reference specifically to the Khoesan languages, it is likely that the ‘pronominal’ elements commonly set out in illustrative tables (at least for the southern African varieties) are not strictly comparable. This statement is based on examination of the function of the respective morphemes, as explained next.

In the case of the KHOE languages, the gender-sensitive, number-expressive suffixes have a polyfunctional capacity to serve not only as cross-referential pronouns (both anaphoric and cataphoric) but also as overt nominal indices of agreement-class membership, and additionally in some cases as deictic specifiers, and even quasi-copular predicators. The inherent ‘semi-deictic’ character of the Khoe affixes is often alluded (e.g. Haacke 1977, Heine 1997, Kilian-Hatz 1997, Kilian-Hatz and Heine 1998), and may well be a trace effect of re-ordering processes, in which the ‘suffix’ morphology now seen in the SAK languages may have emerged via the well-known pathway (cf. Greenberg [1978]) that grammaticalizes a series of unstressed, possibly enclitic demonstrative pronouns which initially function as ‘discourse deictics’, and which tend to preserve the indications of gender inherent in their agreement morphology.

To make this clearer: analogous morphemes in Bantu languages would probably be the occasionally seen enclitic post-nominal demonstratives with weak deictic force. Since they are gender-sensitive, these morphemes bear some formal resemblance to the more directly indexical morphemes usually referred to as ‘noun class prefixes’. (It is easy to see how enclitic morphology of this kind has the potential, in principle, to induce an eventual shift from a prefixing to suffixing mode.)

The examples below illustrate post-nominal enclitic demonstratives as found in Mbukushu (Fisch 1998: 51) and Herero, but other Bantu languages have a similar series, e.g. Gciriku (Möhlig 1967, 2005), and Nyanja/Cewa (Mchombo 2004: 65).

**Fig. III.1.1.** Postnominal enclitics for selected genders of Mbukushu, after Fisch (1998: 51), and for an old variety of Herero as quoted by Johnston (1919: 360).

**Mbukushu.**

	Singular	Plural
1/2	-yu	-wa
3/4	-ghu [ɣu]	-dhi [ði]
5/6	-di	-gha [ɣa]
7/8	-thi [θi]	-yi
9/10	-yu	-dhi [ði]

**Herero.**

	Singular	Plural
1/2	-ngu	-mba
3/4	-mbu	-mbi
5/6	-ndi	-nga
7/8	-hi	-mbi
9/10	-ndyi	-nda

In languages of the JU and !UI-TAA groups the morphemes with the nearest relationship to the enclitic pronominal forms of KHOE are probably the vestigial morphemes of the singular-plural noun-suffixes still visible in some languages of !UI-TAA (if only barely so in some cases). In the case !Xóǀ, the morpheme boundary between the noun stem and the following enclitic element seems to have been breached at some point: the gender-linked noun terminations in this language are often barely separable from the roots, and suggest the past operation of extensive processes of coalescence and (or) elision. This aspect of the !Xóǀ lexical data will be apparent in the comparative tables.)

In the case of !Xóǀ also (possibly as a result of such processes working in conjunction with others that in any case restrict the possible exponents of C<sub>2</sub>) one effect has been that certain C<sub>2</sub>V<sub>2</sub> sequences seem to recur frequently, thus lending themselves to interpretation as actual morphemes or even ‘suffixes’. Traill, for example, broached the idea (1985: 11) in connection with !Xóǀ, that ‘many nouns participate in a non-productive system of thirty classes based on the morphological details of their singular-plural pairings’. It is clear from his further remarks that he conceived these classes to be the remnants of a much older and no longer productive system. It has already been noted, however, that a number of dialects

within the !UI-TAA grouping preserve traces of a former *prefixing* system. The shift to the presently seen ‘suffixing’ system could plausibly have been mediated by the grammaticalization of enclitic post-nominal demonstrative morphemes with weak deictic force (i.e. ‘determiners’); and it seems far more likely that (i) the original gender system was overtly indexed by prefix morphology, and (ii) that it did not have quite as many as the suggested ‘thirty classes’.

As for the ‘pronouns’ of the JU and !UI-TAA groups, it seems likely (judging by their patterns of use and the functions they have retained in some cases) that these have arisen from a different series of morphemes, albeit a series that nonetheless similarly preserves some gender-reflective aspects. It is in some of the !UI languages that the essential character of these pronouns reveals itself most clearly. These languages often have both ‘emphatic’ forms of the pronoun and a simpler form that typically appears either before a verb (as a type of ‘subject-referring’ morpheme, either substituting for or cross-referencing a subject); or after a verb or other part of speech (in the case of objects or other referents). The Bantu-like character of such morphemes in !Xegwi, was observed by Ziervogel (1953), who assumed that this was simply one amongst several other features that ‘seemed to point to the influence of the Bantu language on Bushman’. Very similar patterns are in fact seen in other !UI languages, such as !Xam.

To make this point more precisely: analogous morphemes in Bantu to the simple cross-referential pronouns of the JU and !UI-TAA languages would be the dependent pronominal forms traditionally described as ‘subject’ (and ‘object’) ‘concord’. (It has become increasingly clear over the past two decades that the so-called ‘object concords’ of the Bantu languages may perhaps be better analysed as pronominal arguments, where the nominal expressions linked to them have the discourse function of topics (Mchombo 2004: 51). The so-called ‘subject concord’ is reckoned to be functionally ambiguous by Mchombo, who states (2004: 61-62) that ‘it functions as a marker of agreement with the subject NP in some cases, and as a pronominal argument in others’.) The example below illustrates the picture that might be arrived at if the genders (i.e. singular-plural noun class pairings) of a Bantu language such as Mbukushu were to be defined purely in terms of its (dependent) pronominal agreements, represented below by the ‘subject concords’ for a selected set. (In the orthographies of some Bantu languages these concordial morphemes are written disjunctively.)



**Fig.III.1.2.** Dependent pronominal forms (‘subjectival concords’) for Mbukushu, after Fisch (1998:51).

	Singular	Plural
1/2	gha- [ɣa]	ha-
3/4	ghu- [ɣu]	dhi- [ði]
5/6	di-	gha- [ɣa]
7/8	thi- [θi]	tyi-
9/2	gha- [ɣa]	ha-
9/10	gha- [ɣa]	dhi- [ði]
9/6	gha- [ɣa]	gha- [ɣa]

There are clearly some affinities between the two types of ‘pronominal’ systems described above, which may co-occur within any given language, and where one arises from an enclitic series of weak demonstratives, while the other arises from a series of dependent pronominal morphemes of the type often termed ‘concordial’. Both series are gender-sensitive, so that there is likely to be some degree of *language-internal* consistency in the morphology both use to express agreements. At the same time they remain functionally different series, and it seems unrealistic to expect that juxtaposition of two such only obliquely related systems in *cross-linguistic* comparisons would yield clear and consistent traces of common morphology.

### III.1.1.iii. Differences in the overall configuration of the pronominal paradigms.

Concerning differences in the general organization of their respective pronominal paradigms, it is true that whereas they typically distinguish between inclusive and exclusive reference, the JU and !UI-TAA languages lack a formally grammaticalized dual, and do not make grammaticalized distinctions of (natural) gender in 1<sup>st</sup> and 2<sup>nd</sup> persons.

Yet: a distinction of **inclusive versus exclusive** reference may certainly appear in only some members of a set of related languages, as in the case of ‘Dongo’ amongst the Mba languages. (Given that quantificative stems encoding this distinction are widely found amongst the sets of possible modifiers in the Bantu languages, it would be fairly surprising if it were not to surface occasionally even in Bantu or Bantoid languages as a fully inflectional category.)

Similarly: the grammaticalized expression of a **dual** number value may also be present in only some members of an acknowledged language group. For example, Botne (2003) records the presence of a dual in the north-eastern Bantu language, Beya dialect of Lega (D25), as follows:

**Fig. III.1.2.** Observations by Botne on a dual in the Beya dialect of the Bantu language, Lega

‘Independent subject pronouns, typically used emphatically, occur in singular, dual, and plural forms.

	Singular	Dual	Plural
1	nne	iswé	biswé
2	ugwe	ijwé	bijwé
3	gwě	bo	bábo

‘Object pronouns are similar to their subject counterparts, but no dual distinction is made.’

Although the KHOE languages may seem to be significantly distinguished from other SAK languages in their grammaticalized expression of a dual (which may be further sub-specified for gender, and even person) it is nonetheless noteworthy that some of the JU and !UI-TAA languages do indeed express a type of semi-formal dual. As seen in the tables given earlier, the Jul’hoan pronouns regularly express this number by means of a collocation involving the natural quantifier *tsā* ‘two’, although Güldemann notes (2004a) that ‘dual number is neither marked on nouns nor obligatory with most pronouns’. In the case of the TAA language, !Xóǀ, similarly illustrated previously, Traill cautiously notes (1994: 27) that ‘dual-like’ forms exist for the 1<sup>st</sup> and 2<sup>nd</sup> persons. They appear to mean ‘we two’ and ‘you two’ respectively. This quasi-dual for 1<sup>st</sup> person is *ǀnǀáǀ*, and for 2<sup>nd</sup> person, *ǀnǀúmǀǀ*.

A reasonable explanation for the differences between the KHOE and other SAK systems might therefore be that it is simply a matter of degree, and that the KHOE languages reflect the outcome of more intensive grammaticalization processes. Güldemann (2004d)

discusses processes whereby the dual may have emerged, or at least be in the process of emerging, in the various 'non-Khoe' pronominal systems, from what he calls 'number-specified pronouns'. These last somewhat resemble the ordinary quantitatives of many Bantu languages, which are often likewise constructed from a bound pronominal element (sometimes analysed as a concord) plus a quantitative stem, and which similarly have the capacity to function either as appositional specifiers or as self-standing substitutive forms.

It seems initially a further great difference between the pronominal systems of KHOE and the other SAK languages that the former have introduced fully grammaticalized **distinctions of (natural) gender into the pronouns of the 2<sup>nd</sup> (and in some cases even the 1<sup>st</sup>) person.** Yet innovations in respect of the 2<sup>nd</sup> person are by no means unusual as a general phenomenon, since these pronouns are, in many instances, effectively 'terms of address'. It is perhaps even a universal aspect of language use that degree of social distance between participants may be expressed by a formal correlation in the choice of personal pronouns. Thus there are communities where an addressee who is not a close personal acquaintance is likely to be assigned either a plural pronominal address form, or a 3<sup>rd</sup> person form, or even a plural form of the latter. One consequence of such pragmatic phenomena is that pronouns used in the context of 2<sup>nd</sup> person singular address may turn out to have an historical origin in forms that were previously plural. (The English *you* is an obvious example.) By the same token, pronouns of the 2<sup>nd</sup> person singular may have their origin in 3<sup>rd</sup> person forms.

Since 3<sup>rd</sup> person forms adopted for purposes of indirect address may take the form of honorific titles (e.g. words meaning 'master', 'father', or 'grandmother')<sup>1</sup> the potential exists for an emergence of distinctions based on the natural gender of an addressee. An origin of the Khoe gender-expressive 2<sup>nd</sup> person pronouns in terms of this kind might explain the fact that in Khoe (as indeed in Afroasiatic languages such as Ancient Egyptian) the masculine and feminine morphology of the 2<sup>nd</sup> person does not bear any great resemblance to the masculine and feminine indices of the 3<sup>rd</sup> person, but rather seems to have been separately arrived at.

#### III.1.1.iv. Differences in the systems of nominal subcategorization (i.e. semantic bases of the gender systems).

The question inevitably arises: if the SAK languages are part of a single genetic entity, how is it that the Khoe languages have come to reflect a gender system so different in

terms of its *semantic* subcategorizations? One possibility is that all of the SAK languages were once of the multi-gendered type, but that these formerly complex systems have undergone varying degrees of reduction through formal convergences and semantic realignments, with one outcome being the emergence of the so-called ‘sex-gender’ system now found in the Khoe languages.

It is not uncommon to find <masculine> and <feminine> as the dominant semantic feature specifications of two of the genders co-existing within a wider system of multiple genders (cf. the crosslinguistic study (1991) of Corbett). There are even languages classified as part of Niger-Congo where presently seen masculine and feminine genders appear to have emerged through reanalysis and reduction of the more extensive proto-system. For example, Tucker and Bryan (1966: 116) note:

‘The Self-standing Pronouns of Mba and Ndunga have much in common, except that Ndunga does not show Gender. Mba and Ma show Gender in varying degrees; ‘Dongo shows Animate/Inanimate distinction only. ‘Dongo alone shows Exclusive/Inclusive distinction in the 1<sup>st</sup> Person Plural.’

These pronoun sets are shown below. It will be seen that in the case of Ma, the masculine morpheme *kɔ́* appears to be an innovation, while in Mba, where ‘feminine’ and ‘animal’ fall together, the ‘masculine’ category may be the original ‘personal’ class. Plural forms are either generic - in the case of Mba *ɓɛ* clearly revealing the inherited plural of the Niger-Congo personal class - or else may code a distinction of animate and inanimate reference.

**Fig. III.1.3.** Emergent distinctions based on a semantic criterion of natural gender in Niger-Congo. (Mba group of Ngbaka-Mba, within Ubangi sub-branch of Adamawa-Ubangi: *Ethnologue* 2009.) Data after Tucker and Bryan (1966: 116).

Person	SING					PLURAL			
	Mba	Ndunga	‘Dongo	Ma		Mba	Ndunga	‘Dongo	Ma
1 <sup>st</sup>	nɔ, nu	nɛ̀	ɖɛ	mú, mú	Excl.	é, í	nú	nínyu	èpí
1 <sup>st</sup>					Incl.			nányu	
2 <sup>nd</sup>	mɔ, mɯ	mɔ, mʉ	ɖɔ	mʉŋgɔ́		nya	ná	ɖanyu	òpú
3 <sup>rd</sup> <fem>	ndɛ, ndɪ	mé	zi	kɔ́					
<fem>	ɓi	mé	zi	ónde	<animate>	ɓɛ	lámé	zu	ípòndi
<animal>	ɓi	mé	zi	ndé					
<inanim.>	?	?	wi	ŋgú, ŋgú	<inanim.>	-	-	yi	

Turning back to the specific case of the SAK languages, there may even be a small amount of relic evidence to support a scenario of gender conflation. Within the ‘non-KHOE’ languages, that such processes of attrition have occurred is simply apparent - given that a !UI language such as !Xam reflects only two genders, while the TAA and JU languages clearly preserve more complex systems.

There is also faintly discernible evidence that such processes might have had a similar impact on the present configuration of the KHOE languages. For example, concerning the 3<sup>rd</sup> person masculine plural morpheme *-llua* – seen in other languages of Kalahari KHOE - Barnard noted (1985: 15) that he found it to be ‘extremely rare’ for Naro, at least in the area of his own fieldwork. He found that it was instead:

‘replaced by either *-dzi* (feminine plural) or *-ne*, even in such phrases as *k’áù khùè-dzi* or *k’áù khùè-ne*, both meaning ‘men’ (literally ‘male people’; respectively in ‘feminine’ and ‘common genders). [...] Similarly, for ‘female people’ the phrase

*glláís khùè-ne* is heard as frequently as *glláís khùè-dzi*. Thus *-dzi* and *-ne*, though formally defined as local variants of Common Khoe feminine and common plural suffixes respectively, are semantically neutral.’

If the morpheme *-dzi*, which is reconstructed by Vossen (1997) for Proto Kalahari Khoe as the 3<sup>rd</sup> person feminine plural \*di, had originally a more general plural implication, then it is possible that the specifically masculine plural morpheme, *-llua*, seemingly cognate with eastern Kalahari and Khoekhoe *-gu(a)* or *-ku(a)*, was an innovation at some stage, perhaps even partially definitive of a KHOE splitting from early ‘Southern African Khoesan’.

(Vossen reconstructs it (1997: 346) as the 3<sup>rd</sup> person masculine plural ‘pgn’ suffix \*llua for Proto-Khoe as a whole, though it is more probably \*llu- as suggested (2004a) by Güldemann.)

To sum up this section on typological features that appear to distinguish KHOE from the JU and !UI-TAA members of the SAK languages, it appears to be a reasonable assertion, in the light of the examples produced, that there is not one major difference that could not coexist within an ultimately integrated framework. It may well be the case that the two groups broadly definable as KHOE and ‘non-KHOE’ are only distantly related: but there appear to be no good grounds for an absolute assertion that they cannot be related at all.

### **III.1.2. Various early and contemporary versions of a ‘northern link’ hypothesis.**

The notion of irreconcilable typological difference between the KHOE languages on one hand - and the JU and !UI-TAA languages on the other - seems to have had its origin partly in 19<sup>th</sup> century colonial beliefs, where these were in turn based at least partly on perceptions of accompanying *cultural* differences between speaker communities. Such thinking may well have influenced Wilhelm Bleek, who himself proposed one of the earliest versions of a ‘northern link’ hypothesis - suggesting that the few KHOE languages then known to him had distinct affinities of their own with languages found much further north in Africa, in the group that is today known as Afroasiatic.

In his doctoral thesis, presented at the university of Bonn, Bleek noted the typological fact that both groups of languages had ‘sex genders’, and that these were moreover coded by

rather similar elements, tabulated by him (1851: 58) under the heading of ‘*generum signa*’ as follows:

**Fig. III.1.4.** Wilhelm Bleek’s tabulation of gender affixes for a group of ‘sex gender languages’.

	Hottentotica	Coptica	Semitica	Gallaea	Berberica
masc. sg.	bi, b	f, p, ph	w, û, ô	-	w, j (masc.)
masc. pl.	ku	u (com. pl.)	û	u (com. Pl.)	
fem. sg.	si, s	s, t, th	th, ath, âth, â	ti, t	th, t, s (fem.)
fem. pl.	ti	se (com. pl.)	âth, ôth, â		
com. sg.	i	-	-	-	-
com. pl.	in, n	n	ân, ûn, în, îm	ani	an, in
masc. dual	kha				
com. dual	ra				

On the basis of little more than the evidence reflected in the table, Bleek went on to propose a classification where the primary distinction rested on the presence or absence of sex genders. Those languages lacking this feature were subdivided by him into southern and northern families (of Africa); while the ‘stock’ or ‘lineage’ of the sex-gendered languages (*stirps sexualis*) was split into a northern family – and ‘Hottentot’. (The northern languages were in turn divided by him into Indo-Germanic, Semito-African, and Coptic - with the Semito-African languages being further sub-divided into the Semitic, Galla and Berber groups.)

In hindsight it is easy for us to see how Bleek’s notion of a ‘Hottentot-Coptic’ link probably resonated with other prevailing colonial beliefs. For some, the conjectural tie probably affirmed surmises that an offshoot group of northern people might in ancient times have made their way south along some prehistoric corridor. This theory would have hinted at an explanation for the existence of various ruined structures in the south, which some Europeans were inclined to doubt could have been built by local people without outside assistance.<sup>2</sup> Versions of a similar theory were later put forward by Lepsius and Meinhof, with the latter’s work (1912) eventually acquiring infamy as the ‘Hamitic theory’, now recognized as having been based partially on irrelevant criteria concerning the physiology of speakers.<sup>3</sup>

The theory of a northern connection for some of the Khoesan languages of southern Africa took a new turn with the publication of work by Dempwolff, which publicized the existence of two hitherto hardly-known click languages from north-east Africa, namely Sandawe (1916) and ‘Hatsa’ (Hadza) (1916-17). It was Dempwolff’s suggestion (1916: 60) that Sandawe might belong within the classificatory entity, ‘Hamitic’, and he provided wordlists to support the various strands implied by this connection - including a set of words that purportedly showed affinities with ‘Hottentot’ (i.e. Nama). (For the most part these were words with some very slight formal resemblance to their suggested counterparts, and only a strained semantic linkage).

Sandawe and Hadza, like the Angolan Kwadi, are not without good reason termed ‘isolates’. Their lexis is multilingual, and while in the case of Kwadi (Westphal n.d.) the sources of this lexis seem to be merely local Khoisan as well as at least two different Bantu languages, in the case of the other two, the sources are not only sometimes east African Bantu languages (or perhaps a language from some other related grouping within Niger-Congo) but may also be Arabic - presumably via one of the east African Bantu languages - or Cushitic, as well as Nilo-Saharan.

Despite recent studies elucidating certain aspects of both east African isolates (e.g. Eaton 2003 on ‘focus as a key to the grammar of Sandawe’; or Sands, Maddieson and Ladefoged 1996 on ‘the phonetic structures of Hadza’) it remains far from apparent that the two have much in common with each other, apart from the very general typological factor that both have gender systems where ‘masculine’ and ‘feminine’ form part of the semantic subcategorization. The respective pronominal systems are set out below. (In the case of Hadza, some of the pronominal forms associated with the verb are dependent pronouns of a familiar concordial, i.e. cross-referencing, type.)

**Fig. III.1.5.** The Sandawe system of pronouns after Elderkin (1986).

Person		Singular	Plural
1 <sup>st</sup>		tsi	sũ:
2 <sup>nd</sup>		hapu	sĩ:
3 <sup>rd</sup>	masc	he-we	he-so
	fem	he-su	he-so



Fig. III.1.6. The pronominal forms for Hadza, after Dorothea Bleek (1931).

Person	Singular			Plural		
	Full form	With verb	Obj	Full form	With verb	Obj
1 <sup>st</sup> masc	ɔno	-ɔna, -na, -ma	-ne, -mi	one-bi, o-bi	-o-bi, -ba, -o	-
	fem	-	-	o-be	-o-be, -ba	-
2 <sup>nd</sup> masc	te, tete	-ta, -tita		iti-bi	-ta-se, -ta	-
	fem	te-ko		iti-be	-te-ya, -ta	-
3 <sup>rd</sup> masc	itje	-ma, -mo, -ya	m, a	itje-bi	-pi, -bi, -mi	kwapi
	fem	itje-ko	-kwa	-	-pe, -be, -me	-

Dorothea Bleek also recorded (1956: 55) a set of demonstratives for Hadza, as follows:

		Sing.	Plural
3 <sup>rd</sup>	masc	ha-wa, ha-ba	ha-bi:
	fem	ha-ko, ha-ku	ha-be

Greenberg is generally seen today as the scholar who set things right, ridding us of the Hamitic aberration; and so it is somewhat ironic that his actual method was not all that different from Meinhof's, insofar as he too based his claims of affinity on resemblances involving a few selective items of morphology and similar-looking lexis. Greenberg (1973: 74) invoked a comparison between a Sandawe feminine *-sa* [?] and a stated Hadza 3<sup>rd</sup> person feminine possessive *-sa*; and claimed a connection also between a *-ti* suffix of the Hadza 'plural feminine personal pronouns' and a supposed feminine plural '*-tsi* of Sandawe'. As for masculine morphology, Greenberg remarked on the allomorphs *-wa~ya* that often appear as suffixes to masculine singular nouns in Hadza, and commented (same place) that 'this reminds us of the *-we* of the Sandawe third masculine pronoun'. He noted that in the selfstanding pronouns of the 3<sup>rd</sup> person, Hadza and Sandawe 'share the

same *ha*-base', and also suggested a resemblance between the Hatza locative suffix *-ina* and a Sandawe *-na*. (See Güldemann (forthc. a) for a detailed refutation of Greenberg's 'Khoisan' hypothesis.)

Honken, working within a similar 'macro-Khoisan' frame of reference, attempted in an early work (1977) to show 'that the pronominal, demonstrative and interrogative sub-systems of the click languages are composed each of a small number of elements which are widely distributed among the various click languages'. His arguments included a suggestion that 'Hadza and Sandawe have interchanged the 1<sup>st</sup> and 2<sup>nd</sup> person plural pronouns'; while he also set the Sandawe feminine singular morpheme *-su* alongside Hadza's *-ko*; and juxtaposed Sandawe's masculine singular *-we* alongside the masculine plural *-mi* found as an allomorph of *-bi* in Hadza.

(A further – somewhat slighter - commonality between Hadza and Sandawe might be thought to exist between the verb-based concordial suffix morphology associated with masculine subjects in Hadza, which may be *-ma* or *-mo* (i.e. with initials in a bilabial nasal) – and Sandawe's masculine-associated morpheme which gives the impression of a labial initial segment (as in the pronominal system's *-we*). However, the fact that the Sandawe morpheme is represented by 'ue' in the Ten Raa text (1986) raises the possibility that the labio-velar element is an interpolated glide, and that the actual masculine particle is merely *-e*. This is much the conclusion arrived at by Elderkin (1986) through independent analysis of various constructions.)

In a later work, Honken offered (1988) more substantial discussion, where he attempted to uncover cross-Khoisan patterns of correspondences specifically involving the affricates. One problematic aspect of these later arguments, however, is that they rest on an assumption that the unity of macro-Khoisan can be taken as a primary given. (Sands objects (1998: 38) that Honken's claims of regular sound correspondences are based on 'only one or two examples per sound, and these not even between the same languages'.)

In summary, it seems fair to say that the preliminary case for any linkage *between Sandawe and Hadza themselves* is not strong, being still founded on not much more than some few resemblances involving elements of morphology, and a handful of doubtfully linked words - plus the irrelevant typological fact that both languages use clicks.

The general notion that there might be any likelihood to the persistent belief in some remote genealogical connection involving all or some of the southern and east African ‘Khoisan’ languages was put to test by Sands (1998), who used pan-Khoesan data samples, based on a version of the Swadesh ‘100 basic words’. Sands applied statistical analysis to various structural and semantic configurations of this material to determine whether the percentages of inspectionally similar forms found across some or all of the sample sets exceeded those that might be predicted by chance. (She acknowledged in advance that the discovery of any ‘greater than chance’ values would indicate only that the words concerned were in some sense ‘the same’, and that the possibility of borrowing as the underlying explanation could not be ruled out by this methodology.) Her ultimate finding (1998: 166) was that ‘it seems a little more likely than not that the Northern, Southern, Central Khoisan groups along with Sandawe are related but that additional data and further research is needed to elucidate the relationship’.

Given the lack of any immediately obvious relationship between the two neighbouring east African ‘click languages’ themselves, it seems a long leap to the proposal of an alternative connection for one of them with a small group of languages in the remote south of the continent. Nonetheless, despite the unlikelihood of the scenario, Sandawe on its own does indeed bear a few faint structural resemblances to the KHOE subset of the southern African Khoisan languages. The elements suggestive of such a commonality include aspects of the pronominal paradigm, and are among the pan-Khoesan similarities originally proposed by Greenberg.

In addition to the latter, a further structure-based argument was put forward by Elderkin (1986), who suggested a subtle similarity turning on the use in both KHOE and Sandawe of a gender-coded element that acts as ‘place-holder’ for a demoted subject. Elderkin suggested a parallel between the so-called ‘declarative morpheme’ *ke* that is associated with this syntactic strategy in Nama – and the peak of an intonation contour in Sandawe (which apparently does not have an actually equivalent morpheme, however).

In a still more recent work, those of Greenberg’s suggested Khoesan resemblances specifically linking the pronominal systems of Sandawe and KHOE are partly reiterated by Güldemann and Elderkin (forthc.), who also cite the argument of Elderkin noted above, and proceed to suggest a few further parallels in the shape of the 1<sup>st</sup> and 2<sup>nd</sup> person singular pronouns. These additional resemblances are largely covert, resting on an earlier re-analysis of the KHOE system by Güldemann (2004a, who ‘deconstructs’ the pronominal

paradigm as a means of establishing a congruency between KHOE and the third ‘Khoisan’ isolate, namely Kwadi. (There is sense in which the argument echoes an earlier attempt by Honken (1977) to establish linkages between ‘macro-Khoisan’ pronominal systems by means of a connection routed through Kwadi.)

**Fig. III.1.7.** The Kwadi pronominal paradigm as tabulated by Güldemann 2004a.

Person	singular	dual	plural
1 <sup>st</sup>	ta, tʃi	(h)a-mu	ala, (h)ina
2 <sup>nd</sup>	sa	(h)u-wa	(h)u
3 <sup>rd</sup> masc	ha-dε	ha-wa	ha-u
fem	hee (<ha-e)	ha-wa	ha-ε

It is here simply noted that the existence of a dual in Kwadi can be disputed, while other interpretations are possible of the fragmentary data concerning the pronominal system. Westphal (n.d.) sketched a slightly different paradigm, with equivalent expressions given alongside in the Bantu language of the Kwadi consultants themselves, as shown below:

**Fig. III.1.8.** The pronominal system of Kwadi as sketched in Westphal’s fieldnotes (n.d.), with equivalent expressions given in the Bantu language of the Kwadi consultants.

	singular	plural
1 <sup>st</sup>	ta (ame)	ala (ontwe)
2 <sup>nd</sup>	sa (oʃo)	uwa (onwe)
3 <sup>rd</sup>	adε (eye)	wa’ε (oʃo)
	wε (eye)	wa’ε (oʃo)
	wayo (‘it, a thing’)	waya (‘they’, oʃipuka)

Güldemann’s method was to devise a distinctive (but speculative) lay-out for the proto pronominal system of a proposed ancestral ‘Khoe-Kwadi’.<sup>4</sup> It is the mooted ‘Khoe-Kwadi’ ancestor that is proposed by Güldemann and Elderkin to be relatable to Sandawe, on the basis initially of claimed resemblances involving the pronominal paradigms, later

supported by reference to a few tentatively suggested potential cognate items of morphology and lexis. The suggested parallels between the pronominal systems are set out below, after the tabulation of Güldemann and Elderkin. (The original table carries a note acknowledging previous suggestions of all these possible affinities except the one involving the 2<sup>nd</sup> person singular.)

**Fig. III.1.9.** Suggested affinities between Sandawe and a hypothetical ‘Proto-Khoe-Kwadi’, as proposed by Güldemann and Elderkin (forthc.).

	Sandawe	‘Proto-Khoe-Kwadi’	
1 <sup>st</sup> person sing Pro	tsi	*ti	(Kwadi tʃi)
2 <sup>nd</sup> person sing. Pro	ha	*sa	
3 <sup>rd</sup> person masc. sing. suff.	-w(e), -m	*-V[front]	(Khoe -bV, -mV)
3 <sup>rd</sup> person fem. sing. suff.	-su	*-V[front]	(Khoe -sV)
3 <sup>rd</sup> person Pro base	he-	*xa	(Kwadi ha-)

Concerning the first person singular pronoun *tsi* of Sandawe, it appears to offer a reasonable match with the proposed proto-Khoe \*ti – until it is considered that ‘reasonable matches’ can probably also be found in some members of Afro-Asiatic (and in Niger-Congo) As far as the masculine morphology is concerned, there is some slight evidence, as noted earlier (p. 65) that the relevant item in Sandawe may well be *-e*, with the labio-velar element *-w-* being merely an inserted glide and not an intrinsic part of the morpheme. The alternative masculine morpheme shown as *m* is given by Elderkin (1986) in the context of illustrating two additional suffix series, termed by him ‘High’ and ‘Low’ on the basis of their tonal patterning:

**Fig. III.1.10.** Aspects of the pronominal system of Sandawe, after Elderkin (1986).

	HIGH		LOW	
	sing.	pl.	sing.	pl.
1 <sup>st</sup> P	sé	sú:	sì	sù:
2 <sup>nd</sup> P	pó	sĩ:	pò	sĩ
3 <sup>rd</sup> P masc.	é:	só	Ø, m̂, ŵ, è	sò
3 <sup>rd</sup> P fem.	é:sú, sú	só	sù	sò

If Sandawe does indeed have a masculine-linked *-m*, then this language's particular pairing of masculine-feminine morphemes might just as easily be said to show an affinity with the two contrasting morphemes associated with 3<sup>rd</sup> person masculine and feminine genders in Afroasiatic – particularly in the Egyptian-Coptic descent line, and languages of the Ethiopian Semitic and Cushitic groups.<sup>5</sup> In other words, it is not clear that these morphemes can really be said to be exclusively diagnostic of a KHOE-Sandawe linkage.

In addition, it is not clear why Sandawe itself should be assumed to have remained static. It is not inconceivable that its own pronominal system might originally have looked different as well, even to the extent of appearing ultimately unrelated to the suggested 'Khoe-Kwadi' system.

The doubtful value of their own morphological evidence is conceded, it must be said, by Güldemann and Elderkin themselves, who conclude this section of their paper with the observation that 'the evidence for or against a genealogical relation between Sandawe and Proto-Khoe-Kwadi is inconclusive as far as the pronoun data are concerned'. They bolster their case by suggesting further commonalities involving a small handful of other grammatical morphemes, but these are suggested with such tentativeness that it seems inappropriate to tabulate them (since this might imply more firmness than the authors allow).

As for any supporting evidence of phonetic correspondences seen in the lexis, Güldemann and Elderkin conclude with the sombre assessment:

'The lexical evidence is modest and meagre, to say the least, and the verdict not proven, circumstantial evidence perhaps; some of the comparisons adduced in

earlier work are problematic, as has been noted above. The evidence is too slender to allow three instances of a sound correspondence, which can be taken as a working minimum; more needs to be done than provide similarities in initial consonant: the remainder of morph structure needs to be understood and accounted for in comparisons.’

To sum up: the ‘northern link’ hypothesis remains, on the admission of its own most recent proponents, only a tenuous conjecture. Future studies may some day manage to demonstrate the existence of a connection between southern African Khoesan and one or more of the east African isolates, and the possibility in principle certainly cannot be discounted. However, a much stronger case for this linkage will need to be presented than has to date been offered. For the present, the absence of firm evidence for a ‘northern link’ involving just the KHOE group of languages (i.e. as a distinct set) means that there are no strong grounds for separating them from the other SAK languages.

The discussion above will also have made it clear why the east African isolates are not included within the scope of the present comparative study. For the third (and now extinct) isolate, Kwadi, the linguistic records are scant.<sup>6</sup> The brief notes below explain why this language is similarly not included in the study.

### **III.1.2.i. Reasons for excluding Kwadi from the ambit of the present study.**

In a broad and essentially typological sense, certain aspects of Kwadi are indeed reminiscent of the KHOE languages. In addition to the presence of clicks, Kwadi had animate nouns sub-categorized for sex-gender, with overt coding by means of nominal suffixes; and there is some ambiguous evidence that it may have had a dual, expressed both within the pronoun system and as a nominal number value. The language is also reported to have favoured a verb-final sentence pattern. (There are not many examples of sentences in the data, so that direct evidence of SOV ordering is slight.)

It is noted, however, that although usually identified as a ‘click language, Kwadi seems to have reflected just one click type in the main, namely the dental click [ʄ]. While a handful of words contain the palatoalveolar click [ʈ], in at least one case this is clearly a variant of the dental click. (The word for ‘two’ has the allomorphs |ám and ʈá.) There is moreover

only one illustration of a lateral click [ll] in Kwadi – and this isolated occurrence, as Güldemann and Elderkin (forthc.) note, appears to be a variant. The wordlists provided in Westphal's manuscript notes are too limited to allow any firm conclusions to be drawn, but it is by no means evident that Kwadi had any greater inventory of click words than some of the Bantu languages of the Okavango region, such as the Mbukushu and Gciriku, or Kwangari, which seem to have well below even 100 click words each (cf Legère 1998).

Apart from the 'KHOE-like' vocabulary, which often bears a (very) close resemblance to equivalent words in Kalahari varieties, Kwadi appears to have contained vocabulary drawn from at least two different Bantu languages. The languages used to supply *glosses* for the items of Kwadi vocabulary in the papers are usually presented in a clearly distinct column, and reflect one or other of the two languages spoken by the Kwadi consultants themselves, namely Portuguese and a Bantu language identified by Westphal as 'Lußale – local', but which was probably Kwanyoka (or Kuroka), i.e. a variety closely related to Kwanyama.<sup>7</sup>

It may be the Kwanyoka (alias Kuroka) language of the 'Kwadi' community that accounts in part for the strong Bantu component in the Kwadi material itself, particularly in cases where the glosses are given in Portuguese. (There is no possibility of confusing the Bantu words *in* Kwadi with any of the Bantu glosses that might be given quite separately.) Certainly many of these words ('Kwadi-Bantu A') have a visible affinity in terms of prefixal patterning and regionally distinctive lexis with languages of the general Ambo grouping. At the same time it is clear from differences in the prefix structure (such as absence of a 'pre-prefix') as well as the 'foreignness' of some of the other words - from a regional perspective - that some other Bantu language must have contributed as well. Possible sources of the 'Kwadi-Bantu B' vocabulary seem likely to have been either: some member of the Kwangari group of Okavango languages, such as one of the Rumanyo languages, Mbukushu (Fisch 1998 [1977]; Wynne 1980) and Gciriku (Möhlig 1967, 2005), or Kwangari (Westphal 1958; Kloppers 1994); or conceivably some variety of the Luyana dialects (Lisimba 1985) from the lower western corner of Zambia - one of the the eastern dialects of which is even known as Kwandi.

The very slight possibility arises that Kwadi may have been a type of 'inner language' similar, for example, to Mbugu (cf. Mous 2003) or the two secret languages (To and Labi) formerly used by Gbaja-speaking initiates (Tessmann 1931, 1937). Kwadi appears to have had in common with these auxiliary languages a distinctive set of pronouns, a special set of



numbers, and a composite vocabulary featuring numerous loanwords and coinings (presumably for purposes of avoidance). There is also a small amount of circumstantial evidence that raises questions about its uses and acquisition.

The aspects of its acquisition that seem puzzling are embedded in the following remarks (1994: 240) by Almeida, who noted:

‘Their men, in particular, can speak Portuguese and also the language of the Kwanyoka.

‘The original Kwádi language is not now spoken by all Kwádi; at present only four or five elder Kwádi can speak it. The younger generation do not know it, either because they did not learn it, as it was a difficult language (a “heavy one”) or “because they had grown up among the Whites”, these being the words I have often heard from them.’

The faint implication of these remarks is that opportunities for learning the language were perhaps only available in the specialized circumstances of an older, more traditional upbringing. (No natural language is ‘difficult’ to learn when acquired under normal circumstances.)

The possibility that the language was used for purposes of ‘in-group’ communication is suggested by other indirect comments. Westphal, for example, noted (1971) that: ‘The language presents many problems and only three people seem to use it regularly when together.’ Lastly, it may be noted that Johnston (1919: 800) reported on certain languages of his ‘South Angola subgroup of the ‘South-West Africa Languages (Group X) as follows:

‘92a. Lunkumbi. 92b. Kuvale. The LuNkumbi speech of South-eastern Bailundo, instanced by Capello and Ivens in their Journey to the Territories of Yacca, seems to be very near Nyaneka, from the few words printed by those writers. Kuvale or Kubale, of the Upper Kunene, is represented by a MS. sent by Mr W.J.B. Chapman [...].

‘93. Ndombe or Kwando. 93a. Korōka. This speech of the Mossamedes coast, spoken by the Andombe, Akwandø, and Akoroka tribes (also by the Akubele and

the Akuiso ?), is as yet scarcely illustrated. I travelled through this region in 1882, and gathered then that OluNdombe was very similar to OluNyaneka, but the vocabulary written by me was lost, only a few words being preserved in another note-book. A little more information has been received from Mr W. J. B. Chapman.'

Part of the information from Chapman was to the effect that 'the true Koroka tongue is non-Bantu (Bushman) and not a dialect of Ndombe.' The qualification 'true' in this context seems unusual, and suggests that whereas members of the community in question certainly spoke one of the local Bantu languages, there were occasions when – amongst themselves – they preferred to use a language that contained clicks (hence being identified by Chapman as 'Bushman'). The matter remains far from clearcut, but given ongoing doubts about its true links, and the fragmentary - as well as finite - nature of the data, Kwadi will be excluded from consideration in the present comparative study. (The issues raised above will be explored in a future study.)

#### NOTES.

1. In an old-fashioned grammar (strictly speaking, a 'primer') of standard Malay, Lewis notes some polite conventions (1947: 119-123), citing terms of address such as *Enche*' (usually shortened to *Che*', where the glottalization indicates elision or suppression of a final velar element), as well as *Tuan*, *Nonya* and *Mak* (indicative of relationship, but used generically, particularly in addressing an elderly woman). All of these are used as 3<sup>rd</sup> person expressions. Hence:

'(To Aminah): Che' Minah bĕlum hĕrti?'

Che' Minah INT understand

Lit: 'Does Che' Minah not understand?'

'Don't you understand, Che' Minah?'

Lewis notes that the personal pronouns:

'are less used in Malay than they are in English. [...] Nearly all of them may be either singular or plural. Several of them are substantives which have come to be used as pronouns. There is a wide diversity of usage according to locality.'

	sing	pl
1 <sup>st</sup> person:	aku	kami (exclusive) kita (inclusive)
2 <sup>nd</sup> person:	ěngkau (ka)mu tuan, (ěn)che(k)	ěngkau
3 <sup>rd</sup> person:	ia, dia (měreka, mẽreka itu, orang itu: used in writing)	

2. A belief of this general kind was expressed, for example, by Appleyard (1850: 12-13):

‘When the Rev. R. Moffat was in England, a few years since, he met with a Syrian who had recently arrived from Egypt, and in reference to whom, Mr M. has the following note: “On my giving him a specimen and a description of the Hottentot language, he remarked that he had seen slaves in the market at Cairo, brought a great distance from the interior, who spoke a similar language, and were not so dark coloured as slaves in general. This corroborates the statement of ancient authors, whose description of a people inhabiting the interior regions of Nothern Africa, answers to that of the Hottentot and Bushman. It may be conceived as possible, therefore, that the people here alluded to, form a portion of the Hottentot race, whose progenitors remained behind in the interior country, to the south or south-west of Egypt, whilst the general emigration continued its onward course. Should this prove not incorrect, it might be reasonably conjectured, that Egypt is the country from which the Hottentot tribes originally came.’

Such thinking would obviously today be rejected on several grounds – not least of them the assumption that superficialities of bodily appearance have a meaningful bearing on the affinities of languages.

3. Hayward (2000: 84) describes the gradual unfolding of some of the early scholarly ideas concerning Afroasiatic as follows:

‘By 1877 Müller’s dichotomous ‘Hamito-Semitic’ had added Berber and the then known Cushitic languages. Although acknowledging the similarities of Hausa to Hamitic, Müller did not include it. Lepsius [...], however, was convinced of a special affiliation of Hausa to Berber and incorporated a Berber-Hausa group into his Hamitic family. But he blurred the picture by lodging Hottentot (Nama) and Oigob (=Maasai) here as well, adducing some disarmingly convincing – albeit incorrect – comparisons in the case of the former for close grammatical ties with Egyptian and Beja.’

4. Noting that the invariant dual morpheme *-wa* of the Kwadi 2<sup>nd</sup> and 3<sup>rd</sup> persons might have been a late emergence, and noting the presence in the data of two apparent alternates for the Kwadi 1<sup>st</sup> person non-singular in (*u*)*hina* and *ala*, Güldemann proposes that the precursor language might have encoded an inclusive-exclusive distinction in 1<sup>st</sup> person, and that it might have been organized in the mould of a ‘minimal-augmented’ system. At this early stage, the language might have had a true dual only in the form of a 3<sup>rd</sup> person nominal suffix. The hypothetical early inclusive-exclusive feature is suggested to have been lost during the emergence of proto-KHOE, only to be re-invented later in the Khoekhoe branch, with borrowing of some of the morphology needed for this restoration from an alleged stratum of ‘non-KHOE’ Khoisan languages (cf. Güldemann 2002a). (In fact Hagman (1977) suggests an altogether simpler route for the origin of the inclusive-exclusive morphology in Khoekhoe.)

5. The following diagram, showing the pronominal paradigm for earlier and later (Coptic) Egyptian, is based on the modern study by Loprieno (1995: 67), and shows three main pronominal forms: suffix; enclitic; and stressed – i.e. independent. (Although the forms are shown as approximate diachronic progressions, developments from earlier to later stages of Egyptian are not always simply equivalent to outcomes in the Coptic dialects.)

Pronominal paradigm of Egyptian, after Loprieno (1995: 67).

	singular	dual	Plural
Person			
1 <sup>st</sup>	-j > -I; -wj > -twj- > t-; jnk > ano-k	-nj	-n > -n; -n > ten-; jnn > ano-n
2 <sup>nd</sup> m	-k > -k; -kw > twk- > k-; <u>twt</u> > ento-k	- <u>tnj</u>	- <u>tn</u> > ten; - <u>tn</u> > teten; n <u>tn</u> > entô-ten
f	- <u>t</u> > -e; - <u>tm</u> > twt- > te-; <u>tmt</u> > ento	- <u>tnj</u>	- <u>tn</u> > ten; - <u>tn</u> > teten; n <u>tn</u> > entô-ten
3 <sup>rd</sup> m	-f > -f; -sw > -f; ntf > ento-f	-snj	-sn > ou; -sn > -sou, -se; ntw > ento-ou; -wj
f	-s > -s; -sj > -s; stt > nts > ento-s	-snj	-sn > ou; -sn > -sou, -se; ntw > ento-ou; -tj

Two additional suffix forms (the 'stative' endings *-wj* and *-tj*) are included for the 3<sup>rd</sup> person plural in the table above, so as to show that these may also express a masculine-feminine gender distinction, reflecting the typical Afroasiatic associations of a 3<sup>rd</sup> person masculine morpheme with an initial labiality in its phonetic substance, and a 3<sup>rd</sup> person feminine morpheme with an alveolar element.

For the most part, however, gender distinctions in Egyptian are typically expressed only in the 2<sup>nd</sup> and 3<sup>rd</sup> persons singular, while non-singulars have a 'common' range. The situation may of course be far more complex in other Afroasiatic languages - such as those of the Cushitic group - where the wide range of suffix morphemes used to indicate number values, and the morphemes reflecting masculine, feminine and neuter gender agreements do not necessarily intersect in any simple way (cf. Mous on Iraqw, c. 1993: 41).

6. Westphal noted (1963) that Kwadi 'was first recognized as a new language type by Professor Antonio de Almeida'. (He adds that Almeida's 'tape recordings of a specimen vocabulary were analysed by us in a joint study in Lisbon in 1956'.) The Westphal papers (n.d.) now posthumously housed in the Manuscripts and Archives department of the University of Cape Town Libraries include Westphal's notes dating from this collaborative work. One of the pages carries the date '23.1.65', suggesting that at least some of the papers date from fieldtrips undertaken by Westphal himself (cf. Güldemann 2004a).

7. It is apparent on the basis of differences in the prefixes alone that this 'Luβale' noted by Westphal does not resemble the Luvale (K14) described, for example, by Horton (1949), but rather has unmistakable affinities with languages of the Ambo and Herero groups. It was almost certainly another 'Luvale' - probably the one named by both Johnston (1919: 800) and Baucom (1972).

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## **CHAPTER III: Literature survey Part 2: ‘Lumpers’.**

Previous comparative work on the SAK languages, and related studies.

### **Chapter synopsis.**

No full-scale conventional comparative study of the southern African Khoesan languages has been attempted in the past, although Honken (1998) undertook a systematic search for orthodox correspondences. This chapter briefly discusses (i) Traill’s collection (1986b) of potentially cognate lexical items with cross-SAK distribution; and (ii) Honken’s account (1998) of correspondence types, mainly across the JU-TAA groups.

The chapter also examines (since it is a related study) the theory put forward by Traill and Vossen (1997) to account for certain cross-SAK patterns involving clicks and non-click consonants in alternation. This is followed by a brief illustration of the consequences of accepting the implications of the ‘click loss model’, as manifested in Vossen’s proposals (1997) for the Proto-KHOE inventory of segments. This effectively rounds off the survey with discussion of one last methodological issue.

### **III.2.1. Introduction.**

Reviews of the wider literature by authors who have focused very broadly on ‘macro-Khoisan’ can be found in Traill (1986b) and Sands (1998: Ch.2). The present study – as its title indicates, and for the reasons set out in Ch. III.1.2 – has a carefully defined focus, and does not seek to offer untestable or unmotivated claims about vague external relationships extending back to unknowable time-depths. No full-scale conventional comparative study of the southern African Khoesan languages has previously been attempted, although Honken (1998) undertook a notably systematic search for orthodox correspondences, mainly across JU and TAA, but with occasional reference also to KHOE. Leaving aside those studies that have attempted to incorporate the remote east African isolates, the very few comparative surveys that have specifically focused on the SAK languages have been characterized in the main by:

- i. reliance on the diagnostic potential of pronominal systems (e.g. D. Bleek 1939); and
- ii. a search for lexical lookalikes (i.e. rather than items that might reveal patterns of regularly repeated phonetic alternations) (e.g. D. Bleek 1929; Traill 1986b).

A few of the cross-SAK distributed words originally identified by Dorothea Bleek (1929) appear in the comparative tables at the end of this work. These are labelled ‘DB’.

While the paper by Traill (1986b) reported mainly on a search for lexical ‘lookalikes’ with a complete cross-SAK distribution, it nevertheless also offered some preliminary observations concerning a few seemingly recurrent alternations revealed by his lists of potential cognates. This paper will be discussed below. Some of the patterns noted by Traill involved clicks in alternation with non-click consonants. In what might be termed a related study, such patterns were provided with an explanation by Traill (1986a), and Traill and Vossen (1997), in terms of a model that hypothesizes processes of progressive click shift leading to click loss. Since this model has important implications for interpreting ‘directionality’ (in the context of attempting reconstructions) it is also discussed here.

### **III.Pt 2.2. Traill’s presentation (1986b) of potentially cognate lexical items with cross-SAK distribution.**

Traill presented a list of 28 potentially cognate lexical items with a distribution across the full spectrum of the Southern African Khoesan languages, plus a second list of a further 52 words with a partial distribution across SAK groupings such as the Khoekhoe and Kalahari branches of KHOE, Eastern #HOAN, JU (represented by Ju|’hoan) and TAA (represented by !Xóǀ). Some of these words are included in the comparative material at the end of this work. Words from Traill’s first list are identified by the code ‘AT1’, and from the second list by the code ‘AT2’.

Traill proposed that the representation of these particular words throughout all of the major groupings of the SAK languages made it less likely that their cross-SAK distribution had come about as the result of borrowing, and it was his conclusion that a cautious ‘lumping’ might be suggested: ‘So do the Khoi have a place in the San? It looks like they deserve one!’

It will be noted that Traill did not seek to establish the initial likelihood of a possible relationship by first identifying structural commonalities. Without such preliminary grounds he was not in a strong enough position to seek out potentially valid cognates that might be less than directly resemblant. He did, however, state plainly that while the existence of apparent cross-SAK sets was strongly suggestive of a SAK unity, his



contribution was preliminary in nature, and that his lists provided ‘only *likely cognates*’ [italics added]. Clearly the determination of actual cognacy would have to rest on a later demonstration of phonetic correspondences; but he himself pointed out a number of promising patterns even in the limited sets of words he was able to list.

These preliminary patterns noted by Traill on the basis of evidence from his lists fall into two broad groups, insofar as they concern properties of (i) vowels and vowel sequences, and (ii) alternations between clicks and ‘non-click’ consonants.

*Patterns involving vowels.*

Two of the patterns included vowels characterized by distinctive features (as shown by the added underlining below), and involved ‘equivalences’:

- \* ‘between uvular stops, pharyngealized vowels and velar fricatives’; and
- \* ‘between aspiration (and *h*) and (pharyngealized) breathy vowels’.

Of the examples cited for these patterns, a few turn out to be Bantu-like in appearance, and in some cases can even be shown to be nothing less than Bantu (by reference to comparative material, or Proto-Bantu roots). This is true of Traill’s cross-SAK lists as a whole, where Bantu (or strongly Bantu-like) words include those given for ‘butterfly’, ‘shade’, ‘unroll’ and ‘year’ in the first list [AT1]; and ‘bark [n]’, ‘cast skin’, ‘cook’, ‘hunt’, ‘lizard’, ‘sprout’, ‘tickle’ and ‘tamma’ in the second [AT2]. (There may well be others.) This turns out to be a valuably enabling factor, since, as will be seen in the final stage of this work, it opens up the possibility of wider comparative reference and permits the exploration of new explanatory scenarios.

A third vowel-based pattern involved epenthesis of a vowel (or semi-vowel) in the sequence VV. Traill described it as an ‘equivalence’:

- \* ‘between V and VV sequences [...] via a process which copies V<sub>2</sub> after V<sub>1</sub> in CV<sub>1</sub>CV<sub>2</sub> sequences.’

Once again, the fact that some of Traill’s examples can be shown to be remarkably Bantu-like will permit reference to similar phenomena in Bantu languages, thereby opening the

way for a simple and unified explanation to be offered at a later stage, not only for the patterns above, but for a number of related ones.

*Patterns involving clicks and 'non-click' consonants.*

Concerning patterns involving clicks and 'non-click' consonants as alternants, Traill noted that patterns visible across the spectrum of his SAK material seemed to mirror a number of the patterns already well-known to occur *within* established groupings. These included 'equivalences':

- \* 'between ʘ-series clicks and palatal (leading to alveolar) stops or affricates';
- \* 'between a !-series click or velar stop and an alveolar or palatal stop or affricate';
- and
- \* 'between Nama lʔ and tsʔ in some other languages'.

Observations of this kind, initially concerning the KHOE group (e.g. Traill 1986a), but later extended to cover the full spectrum of SAK languages, were developed by Traill and Vossen (1997) into a general theory of click loss. This theory, which was postulated to proceed via an intermediate process of click shift, is discussed in a section below, following a summary of Honken's seminal study.

### **III.Pt 2.3. Honken's study (1998) of 'Sound correspondence patterns in Khoisan languages'.**

Honken's paper represents the first major attempt at an analysis of cross-SAK patterns within a conventional comparative framework, even though, as in Traill's study, the possibility of unity is simply assumed without prior grounds, or else is perhaps taken in the form of an 'advance', i.e. on the understanding that the demonstration of correspondence patterns will itself constitute the necessary evidence. The study is based primarily on data for JU (Ju'hoan and !Xung) and TAA (!Xóǀ), but includes reference in some cases also to varieties of KHOE. Honken discusses a range of patterns, which he subdivides into the categories 'conservative', 'classic', 'quirky' and 'sporadic'. Any series identified by him which may appear in the comparative tables at the end of the present work will be designated by the code 'HH'.

A ‘conservative’ correspondence essentially involves an identity. Honken identifies several correspondences of this type across the JU-TAA range, but acknowledges that the items might just as easily be loanwords as potential cognates.

A ‘classical’ correspondence is reflected in a regular pattern, where ‘each language has a distinct reflex and the reflexes can be correlated with particular environments’. Honken discusses three examples, including a set of affricate correspondences across the JU-TAA groups, and a set of ‘tonal matchings’ spanning Khoekhoe and Kalahari groups of KHOE, JU and TAA.

The words illustrated by Honken in connection with the affricate patterns are of particular interest. One or two are amongst those featured in Traill’s lists of items with a potential cross-SAK distribution; while some have counterparts reconstructed for Proto-KHOE. This widespread distribution of affricated non-click consonants, and the systematic variations seen in their cross-dialectal instantiations together seem to confirm that such segments are an integral part of the inventory of all Khoesian languages. Above all, Honken’s demonstration of a systematic relationship running across the JU (!Xung and Jul’hoan) and TAA languages suggests the great likelihood of a genetic unity for the ‘non-KHOE’ language groups (and by implication also !UI).

In order to show the tonal matchings mentioned above, Honken first expands on Beach’s original recognition (1938: 214-216) that

‘among the Korana roots having cognates in Nama [...], the roots commencing with fully voiced plosives always had one of two tonemes in Nama - either [mid-rising] or [low-rising].’

Although modern Namibian Khoekhoe no longer has a voicing contrast, the tonal pattern remains; while some words preserve a written distinction between ‘p’ and ‘b’ or ‘t’ and ‘d’ in conventions of spelling inherited from the 19<sup>th</sup> century. (Needless to say, the correlation between voicing and tonal patterns is not in itself explanatory, but merely points to the existence of an ‘underlying’ or original systematicity.)

Honken considers data for Nama, Naro and Kxoe (i.e. spanning Khoekhoe and Kalahari varieties) and comes to the conclusion that ‘there is a more complex three way correspondence depending on the nature of the initial consonant’, as follows:

‘When the Naro or Kxoe initial is voiceless (k, kx, !, !’, !x, !x’, etc.), Nama mid level corresponds to a short falling tone. When the initial is voiced in Naro and Kxoe (g, g!, etc.), all three languages have a rising tone. But if the initial is aspirated or nasal (m, n, n!, kh !h, etc.) something curious happens: Nama has the ‘voiced member of the pair and Naro and Kxoe have the ‘voiceless.’’

Honken then takes KHOE examples (Khoekhoe and Kalahari) of the first tonal pair (involving voiceless initials), and places them in series with equivalent items for JU (!Xung and Ju|’hoan) and TAA (!Xóǿ), and suggests that similar correlations exist across the sample, between patterns of voicing or aspiration - and tone.

In illustration of a ‘sporadic’ correspondence’, Honken recalls the well known JU-internal alternation (cf. Westphal 1974, Snyman 1980, 1997) where languages of the ‘Southern’ group, such as Ju|’hoan, feature the postalveolar click [!] where languages of the ‘Northern !Xung’ group may *sometimes* feature the lateral aleolar click [||] as its counterpart in equivalent words. Honken contributes new examples to illustrate occurrences of a similar pattern sporadically manifested across Ju|’hoan (JU) and !Xóǿ (TAA).

In a ‘quirky’ correspondence pattern, as Honken explains, ‘several outcomes of the rule are possible and it is not easy to specify the conditions which lead to a particular outcome’. He mentions aspiration as a feature that fits this profile. In some cases, for example, a spread of outcomes where some involve this feature may be attributable to variable consequences of Traill’s principle (1974) of ‘Aspiration Absorption and Lenition (Voicing)’. He summarizes this principle as follows:

‘There is a tendency for vowels to develop breathy voicing after an aspirated initial; the sequence ChV̥ is then reinterpreted as a voiceless initial followed by a breathy vowel (CV̥). There is a further tendency for the breathy voicing to “contaminate” the adjacent consonant and cause it to become voiced (gCV̥). In either case, the

breathiness may subsequently be lost, leaving a voiced or voiceless initial followed by a vowel with modal phonation (CV, gCV).

This principle effectively treats the vowel feature of breathy voicing as an emergent quality attributable to the perseverant effect of a preceding consonant feature (aspiration). There is a sense in which it is parallel, with due changes made, to the explanation offered for vowel pharyngealization, as noted earlier.

Expanding on the notion of 'quirkiness', Honken presents a set of plausibly cognate words spanning JU-TAA, where the click types pattern identically, but where the accompaniments may show aspiration *or* nasalisation (in some cases voiceless) - patterning with delayed aspiration *or* nasalization. The complexity and seeming randomness of these patterns may be explained, Honken suggests, by referring not only to Traill's principle (as above), but also to the well-known association of certain types of aspiration ('delayed aspiration') with voiceless nasal airflow. With the possibility that both processes might be involved, Honken suggests an explanation for many of the seemingly uneven correspondences in terms of 'differences in timing of various factors such as voicing, aspiration and nasality'.

### **III.Pt 2.4. Traill and Vossen's theory (1997) of click shift leading to loss.**

Traill and Vossen (1997) hypothesized a general succession of events that might be involved in the weakening and eventual loss of clicks - invoking articulatory and acoustic (i.e. perceptual) factors as explanatory mechanisms. Their theory was an attempt to provide an explanation for a number of observations, some of them concerning patterns of alternations involving clicks and non-click consonants, and others involving alternations between different types of clicks. Of the former, the best-known type was a pattern particularly visible across varieties of Kalahari KHOE, where the palatoalveolar click [ʈ] is seen to alternate with ordinary non-click palatal and palato-alveolar affricates (cf. Traill 1986a). Of the latter, the best-known type (cf. Westphal 1974) was the pattern already noted, involving the postalveolar [!] and lateral alveolar [l] clicks in an alternation across varieties of JU.

Traill and Vossen treat the two click types [!] and [l] as absolute entities, and interpret the patterns they participate in across a range of SAK languages not as abstract alternations,

but rather as the direct manifestations of a universal (if sporadically occurring) type of mechanical progression. This progression is proposed in the form of a literal ‘shift’ from the ‘fortis’ abrupt postalveolar click [!] to the weaker affricated lateral [ll] type. This physiologically driven change is conceived as the first stage in a process of gradual weakening that leads to eventual click loss (though with retention in most cases of the associated accompaniments).

Implicit in Traill and Vossen’s theory is a particular assumption concerning the directionality of change, i.e. in the case of comparative series involving click and ‘non-click’ segments. This is an assumption of major consequence, since it has a direct bearing on the proposal of proto-segments when it comes to the work of reconstruction. (For example, the same assumption, that clicks are the more ‘basic’ segment type, underpins the reconstructions proposed by Vossen (1997) for KHOE, as briefly discussed below in subsection 2.4.i.)

Traill and Vossen briefly considered the reverse assumption, i.e. that the less ‘marked’ non-click segments came first, and that the unusual click sounds should be seen rather as the outcome of innovation. They decided, however, to discount the possibility:

‘Throughout this paper we have referred to click “loss” and click ‘weakening’ implying that the Khoesan data do not support the opposite interpretation, namely click “genesis” from non-clicks. We have not explicitly argued against click “genesis” or click “strengthening” simply because we see nothing in the data to support it and we feel that our phonetic and sociolinguistic explanations are adequate. [...] The step from speculation about [...] sources for clicks to the construction of a coherent argument for the processes involved faces major difficulties, such as the complete absence of any supporting comparative data.’

From a practical point of view, it may be noted that at least the bilabial click [⦿] is amenable to a ‘genesis’ account, having always been in principle the easiest click to account for. Ladefoged noted (1982: 150) that in the case of the doubly articulated West African labiovelars,

‘during the labial and velar closures the back of the tongue moves slightly further back, creating a slight suction effect as in a click’.

As a result, he said:

‘the stops [kp̥, gb̥] and the nasal [ŋ̥m̥] often have a weak velaric ingressive mechanism, so that they can be classified as [...] bilabial clicks’.

If one of the clicks could in principle be accounted for as ‘emergent’, it seems reasonable to assume that the others might be similarly explicable. Nevertheless, the very rareness of clicks suggests that any processes that might be involved in their ‘genesis’ are unlikely to be simple. It seems more likely that click emergence would involve a multifactorial scenario.

From a theoretical point of view, there are certain awkward consequences that ensue when clicks are assumed to be original. One minor dilemma arose, for example, when Vossen found (1997: 297-8) he had to reconstruct certain words at the Proto-KhoeKhoe stage with a dental click initial \*|x, yet could not justify reconstructing them with anything other than a *non*-click initial \*ts for the earlier stage of Proto-KHOE. (Although this might be a marginal pattern within the context of KHOE, a similar pattern is seen more widely across the cross-SAK spectrum; and indeed some of the problematic words just alluded to include items identified by Traill (1986b) as having a cross-SAK distribution.)

A much more serious consequence – i.e. of assuming that clicks are original segments - is the generally ill-formed shape of the proto-inventory that is bound to be projected on this basis. An illustration of this is provided in the following sub-section.

### **III.Pt 2.4.i. Consequences of adopting a model of the kind proposed by Traill and Vossen: Vossen’s inventory of segments for proto-KHOE.**

The KHOE languages constitute the only Khoesan grouping for which a substantial body of published reconstructions exist (Vossen 1997, following the offering of an earlier set (1974) by Baucom), and it is for this reason that the reconstructed phonetic inventory for Proto-KHOE is used to illustrate the point below. (The reconstructed vowels proposed for Proto-KHOE need not be discussed here. They include a basic 5-vowel set of plain vowels, plus 3 nasalized vowels, as well a large set of ‘diphthongs’, both plain and nasalized.)

Figures 1 and 2 below show the respective sets of proposed non-click consonants and clicks in the proto-inventory of this Khoesian language. The gap created by the absence of a palatal series in the set of reconstructed non-click consonants is in a sense partially complementary to the set of clicks. A full palatal series of non-click consonants appears for proto-Eastern-Kalahari KHOE, but these are interpreted as outcomes of a late-stage loss of the corresponding ancestral clicks: Proto-Eastern-Kalahari KHOE is reconstructed with only dental and lateral alveolar clicks.

As the first diagram shows, the proto-inventory of non-click consonants contains a series of stops, fricatives and affricates, with voicing as a characterizing feature only in the case of the stops; and aspiration as a characterizing feature only in the case of the alveolar and velar stops (where the absence of \*ph might be part of the more general phenomenon of the labial gap in Khoesian languages). While there is no set of ejective plosives and no plain velar affricate, there are nonetheless two ejective affricates (alveolar and velar).

**Fig III.2.1.** The non-click consonant inventory projected for Proto-KHOE (Vossen 1997: 326).

Voiceless stop	*p	*t	*k	*ʔ
Voiced stop	*b	*d	*g	
Aspirated stop		*th	*kh	
Voiceless fric		*s	*x	*h
Voiceless affric		*ts		
Ejective affric		*tsʔ	*kxʔ	
Nasal	*m	*n		

#### Notes to Fig.III.2.1

- i. The realizations of some alveolar segments (e.g. \*t and \*ts) may have a dental character, e.g. in Nama (Khoekhoe), cf. Beach (1938: 55, 65).
- ii. Beach noted (p. 57-67) that the voiceless plosive [k], the fricative [x] and the voiceless aspirated affricate [kxh] mainly occur before back vowels. The last two reflexes in Khoekhoe are slightly ‘backed’, i.e. post-velar.
- iii. The voicing contrast is no longer reflected in modern Namibian Khoekhoe outcomes.



The four click positional types of KHOE are reconstructed with a range of pre-existing ‘accompaniments’, as shown.

**Fig.III.2.2** The clicks of Proto-KHOE are reconstructed with a range of accompaniments: (Vossen 1997: 319).

	dental	palato- alveolar	(post)- alveolar	lateral alveolar
(i) basic	*	*ɸ	*!	*
(ii) voiced	* ̣	-	*!̣	*  ̣
(iii) nasal	* ̃	*ɸ̃	*!̃	*  ̃
(iv) (nasal-voiced?)	-	*ɸ̃N	*!̃N	-
(v) voiceless uvular fricative	* x	*ɸx	*!x	*  x
(vi) ejective uvular	* xʔ	*ɸxʔ	*!xʔ	*  xʔ
(vii) aspirated	* h	-	*!h	*  h
(viii) glottalized	* ʔ	*ɸʔ	*!ʔ	*  ʔ

The resulting proto-inventory of combined click and non-click consonants contains not only a very high (or, in other words, non-parsimonious) number of segments overall, but includes several rare ones (the clicks), as well as some asymmetrically elaborated ones, such as the non-click affricates characterized by features that are not systematically found throughout the non-click inventory (i.e. also with simpler segments such as the plosives). Any proposed proto-inventory that presents a picture of this kind raises concerns about its economy. It will be apparent that one of the main factors responsible is the assumption that clicks of each positional type - together with each of the accompaniment possibilities - should be represented in the set of original segments.

It also seems noteworthy that the reconstructed proto-inventory for KHOE has an odd ‘shallowness’, in the sense that it bears a close resemblance to the actual phonetic inventory set out for Nama by Beach, where this resemblance extends even to the set of oral and nasal vowels and vowel sequences (‘diphthongs’). The only significant departure is the addition of voiced series for click and non-click consonants, so as to allow for the

contrast still reflected in varieties of Kalahari KHOE. (This maximalist approach is another reason for the great size of the projected proto-inventory.) It appears to be the case that a narrow focus on just one group of the SAK languages may make it difficult, if not actually impossible, to set up a proto-inventory that is capable of reaching back very far. (The endeavour seems analogous to trying to arrive at a reasonable inventory for Proto-Bantu through exclusive consideration of the phonetic inventories of just a single sub-group of its languages, for example, the set consisting of the Sotho, Tswana and Kgalagadi languages and dialects.)

This consideration is one of the reasons for the approach adopted in the present study, where a relationship between the KHOE, JU and !UI-TAA groups is investigated as an *overarching* possibility. It is already possible to make a preliminary assumption that the JU and !UI-TAA families might branch from a single node of their own - i.e. potentially forming a sub-group. (This much is suggested by studies such as those of Traill and Honken outlined above in Sections III.Pt 2.2 and III.Pt 2.3.) Examination of evidence across a more extensive spectrum should in principle make it possible ultimately to propose a proto-inventory of greater depth (and greater simplicity). With such an inventory in place, it may *then* become possible to start mapping the emergence of particular reflexes – even including the emergence of clicks; and to start identifying intermediate stages.

**STAGE 1: ESTABLISHING THE BASIS FOR THE WORKING HYPOTHESIS.**

Chapter IV. Cross-SAK similarities involving multi- and serial verb constructions (or their grammaticalized outcomes).

Chapter V. Cross-SAK similarities in the sub-systems of specifiers.

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## **CHAPTER IV. Cross-SAK similarities involving multi-and serial verb constructions (or their grammaticalized outcomes).**

### **Chapter synopsis.**

The chapter outlines Aikhenvald's typological framework for the discussion for serial verb constructions, and then shows how its concepts may be extended to cover the more general category of multi-verb constructions. The various roles of multi-verb constructions in Khoesian languages are described and illustrated, first for the JU and !UI-TAA languages, and then for the KHOE languages. In the course of these accounts, multiple instances are noted across the SAK spectrum of *morphologically similar* verbs being enlisted for *similar grammatical purposes* - so as to suggest the likelihood of a unity that involves (1) the JU and !UI-TAA languages as an entity, and (2) the SAK languages as a whole. The Tables at the end of the chapter present these shared grammatical stems.

### **IV.1. Introduction.**

The evidence that will be presented in the following two 'establishing' chapters is of the kind classically taken to provide good-enough grounds for proposing that, on the face of things, there is a plausible case for possible unity. The present chapter will show the existence of extensive cross-SAK similarities involving grammatically enlisted verbs, as found in the multi-verb or serial verb constructions associated with the expression of modality, tense and aspect, as well as various locative and directional relations. The following chapter will point to the existence of cross-SAK similarities in a full 'syntagmatic' suite (as Nichols puts it) across the specifier system, of the various deictic, quantificational and descriptive morphemes that may be used as modifiers of the noun.

It will be seen in this chapter that there is a common occurrence in KHOE, JU and !UI-TAA languages of multi-verb predicate formations or of grammaticalized elements attributable to former constructions of this kind. The verbs in the complex Khoesian constructions are used, conventionally enough:

- i. to provide implications of tense, aspect and modality,
- ii. to provide locative implications of direction and situation,
- iii. to allow for additional arguments and complements, and

iv. to extend or modify the semantic content of other verbs.

It hardly needs to be said that the mere sharing of a general typological profile cannot be considered suggestive of actual genetic relationship. The argument here is that repeated resemblances can be seen in the actual *morphology* of verbs enlisted for specifically similar grammatical purposes across the SAK languages.

The cross-SAK similarities in the morphology of verbs commonly used in multi-verb formations is apparent on inspection of the items listed in the Main Tables at the end of this chapter, which present:

**Main Table [IV]1.** Cross-SAK comparative series of basic itive, ventive and postural verbs commonly enlisted for grammatical purposes.

**Main Table IV(2).** Cross-SAK comparative series of verbs commonly enlisted to express subjective attitude and sequence of actions.

**Main Table [IV]3.** Cross-SAK comparative series of verbs commonly enlisted to express capacity or obligation.

**Main Table [IV]4.** Cross-SAK comparative series of verbs with negative implications (e.g. of presence, possession or capacity).

**Main Table [IV] 5.** Cross-SAK comparative series of verbs expressive of process type.

**Main Table [IV]6.** Verbs with intrinsic directional implications.

In the interest of clarity, it should be explained that the term ‘multi-verb construction’ will be used here in two senses, where the meaning intended will usually be clear from the context. Firstly, it is used in a wide sense as a superordinate or generic term for any type of construction that involves compound predicates. In this sense, serial verb constructions (SVCs) can be seen as a sub-type of multi-verb constructions. Secondly, it is used to refer to a specific, more formal type of multi-verb construction (MVC), of the type found, for example, as a regular predicate form in many southern Bantu languages.

Serial verb constructions are, of course, not restricted to Africa, and are found in possibly as many as a third of the world’s languages (Dixon 2006). Although not noted in modern Indo-European languages, there would almost certainly have to have been multi-verb constructions of some kind during a very early stage of Indo-European, so as to account for later lexicalizations involving a directional verb and a main verb. Examples may be seen in numerous items

subsequently borrowed from Latin into English with already inert prefixes such as *ad-*, *in-*, *ex-*, *con-*, *per-* and so forth, where the originally verb-like character of these elements is clearest in the case of *trans-*, which reflects the participial form of a verbal root (< PIE \*terh<sub>2</sub>) meaning ‘cross over, overcome’ (Watkins 2000: 91).

Despite their wider occurrence, true serial verb constructions (SVCs) are perhaps most often associated with languages belonging to west African branches of Niger-Congo, although they are not found universally throughout the supergroup. Dwyer (1989) notes, for example, that ‘none of the Mande languages use serial verbs’, while for the small group of Dogon languages, Bendor-Samuel, Olsen and White note (1989) that ‘sentences frequently concatenate verbs, though not in true serial verb form, but as clause strings’. As far as the Bantu languages are concerned, it is almost surprising, given their membership within Niger-Congo, that they do not feature more constructions of this kind. Instead, some Bantu languages present an extensive range of multi-verb constructions (MVCs). In the case of Khoesan languages, one of several respects in which they bear a broad typological resemblance to members of Niger-Congo lies in their similar use of multi-verb predicates - in the general sense of the term – where these may have the character of true SVCs, as in JU, but in the case of other languages may perhaps be more accurately described as MVCs, as in |Xam (!UI).

The first scholar to note the existence of such constructions in Khoesan was Wilhelm Bleek, who observed a number of different types in |Xam (cf. W.H.I. Bleek 2000 [1911]: 144-154). The specific types or uses of the multi-verb sequences identified by him may be classified as follows:

- i. verbs of motion with latent deictic implications, typically ‘itive’ (llā) or ‘ventive’ (*sha*);
- ii. verbs of motion with locative implications, such as: *u* ‘go away’, |*hiŋ* ‘come out’, |ē ‘go in’, llāi(*tɛn*) ‘go up’, !ā ‘go along’, or ll*kau* ‘be on’;
- iii. auxiliary verbs expressive of modality, such as *se* ‘must’;
- iv. verbs adding temporal, sequential or manner modifications, e.g. !*hou* ‘do afterwards’, llā ‘do again’;
- v. verbs used in symmetrical complex predicates, e.g. |*kāmmin-ŋ-ti* ‘carries taking’ (< |*kāmmin* ‘carry’ + *ti* (~*ki*~|*ki*) ‘take’), or *ts’u-hho* ‘lifts up by blowing’ (< *ts’u* ‘blow’ + *hho* ‘lift up’).

Bleek's original commentaries were later expanded upon by his daughter, Dorothea Bleek, who based her grammatical analyses (1929-30) mainly on |Xam, while drawing parallels with other !UI languages. She noted:

‘Two or three verbs can be strung together in a sentence, sometimes joined by one of the particles *ki, ko, kau, ti, to, tau, si* or by |*ki* ‘to take’, sometimes without any connection. It is possible that the adverbs and prepositions which have also a verbal meaning or really verbs used in this manner.’

She further commented:

‘Moods and tenses are formed by placing one or more verbal particles or auxiliaries before the verb in chief. A few of these can be used as independent verbs, others are not found alone, though they may once have been so used. These particles do not correspond exactly with one mood or tense in English [...]. Occasionally also the verb takes an ending, generally when it can be translated as a participle.’

Elsewhere, in ‘A short survey of Bushman languages’ (1939) she noted:

‘The verb is often expanded into several verbs. Those used as auxiliaries precede the main verb or verbs, which may be of equal value. [...] In |Xam the verb used adverbially generally precedes the main verb, but an adjective used adverbially may follow it, and a noun with a preposition used as an extension always does so.’

Maingard (1937) was to note the presence of ‘double verbs’ in another !Ui language, #Khomani.

For the TAA group, examples provided by Traill (1994: 31-32) of ‘double verbs’ in !Xóǀ include the following:

**Fig. IV.1.** ‘Double verbs’ in !Xóǀ, after Traill (1994: 31-32).

Gà'bu-ǀlu	‘slosh’ + ‘enter’	>	‘slosh into’
ùa-ǀnûu	‘grasp’ + ‘squash’	>	‘squash in the hand’
?llnûhm-g!xàa	‘stab’ + ‘split’	>	‘poke open (e.g. a melon)’
!ǎhle-!gâ'o	‘stand on’ + ‘put-in [p/]	>	‘trample into’
dtshúm-!nàhm	‘blow’ + ‘remove’	>	‘blow away’
dtshúm-#náu	‘blow’ + ‘take-out [p/]	>	‘blow out’

Traill added, however, that ‘in some cases the two verbs are linked by a particle **kâ**’:

**Fig. IV.2.** Examples of ‘double verb’ constructions in !Xóǀ featuring intervening morphology.

!kx'áli kâ #náu	‘squeeze-out’ + ‘remove’	>	‘squeeze out’
#õhõ kâ ll' àõ	‘trade’ + ‘take [sg]’	>	‘buy [sg obj]’

It will be seen later that this aspect of the ‘linking morphology’ visible in the !UI and TAA groups is of some significance. In the case of the JU language, JU]hoan, the presence of serial verb constructions was indirectly noted by Snyman, who alluded (1970: 124) to ‘the semantic fusion of more than one verbal stem’. The phenomenon in Ju]hoan is further discussed by Sebba (1995), and Dickens (2005: 81-86).

As for the KHOE languages, the occurrence of ‘double verbs’ in languages of the Khoekhoe branch has long been noted. Meinhof commented (1909: 109) on their occurrence in Nama, and also mentioned (1930: 48) their existence in !Ora. Examples given by Meinhof for the latter included the following:



**Fig.IV. 3.** Examples of ‘double verb’ constructions in !Ora, after Meinhof (1909: 109).

di-thã	‘do’ + ‘feel, sense’	>	‘try, test’
di-tõa	‘do’ + ‘complete’	>	‘finish, make ready’
ll’ama-xu	‘trade’ + ‘leave’	>	‘sell’
‘ũ-hã	‘take’ + ‘stay’	>	‘have, possess’
‘ũ-ha	‘take’ + ‘come’	>	‘bring’

Nonetheless, it has not always been entirely accepted that the KHOE languages as a whole are intrinsically verb serializing. For example, Güldemann has suggested (2003b) that the presence of the ‘double-verbs in languages of the Khoekhoe branch may reflect areal influence rather than inheritance. Contrary to this, Kilian-Hatz (2006) makes a fairly clear statement concerning the cross-SAK distribution of this feature, noting that:

‘languages of the two main branches of the Khoisan family, that is, the non-Khoe branch and the Khoe (or Central-Khoisan) branch, seem to have serial verb constructions’.

Drawing on the terminology of Aikhenvald (2006), Kilian-Hatz has argued that within the Kalahari subset of the Khoe languages, the Khwe varieties may indeed be said to make use of serial verb constructions, including not only those of the ‘symmetrical’ kind that typically develop into lexicalized forms over time, but also several constructions of the ‘asymmetrical’ kind. (These terms will be explained below.) The serial verb constructions in Khwe have evidently already become partially or even fully grammaticalized, and it is part of Kilian-Hatz’s conclusion that an incipient grammaticalization of similar patterns can be detected in the related Kalahari language, Naro, while intermediate stages of grammaticalization are visible also in varieties of !Ani-Khwe.

As the study by Kilian-Hatz demonstrates, the typological framework of Aikhenvald offers a theoretical compass that proves particularly valuable in cases where the constructions presented by different languages may no longer be exactly equivalent - having sometimes undergone extensive (and possibly divergent) processes of grammaticalisation – yet where the sources,

once they are tracked down, turn out nonetheless to be very similar. Since it will be useful to make similar orientational reference to some of these concepts in the discussion that follows, the key points of Aikhenvald's typological classification of serial verb constructions are summarized in a section below.

The remainder of this chapter is divided into the following parts:

- i. The key points of Aikhenvald's typological classification of serial verb constructions are summarized.

This framework provides a useful terminology and point of reference for purposes of crosslinguistic comparison. In particular, the framework establishes certain fairly universal tendencies, both in the semantic categories of predicates likely to be enlisted, and in the kinds of outcomes that typically emerge as the result of grammaticalization processes.

- ii. It is briefly shown how similar concepts may be relevant in discussions of multi-verb constructions.

The reason for describing and illustrating constructions of the multi-verb type is that certain aspects of serial verb patterns in some Khoesan languages raise the possibility that these constructions are underlyingly multi-verbal in nature. Constructions of this kind are described here with illustrative reference to patterns in selected southern Bantu languages. (The detailed reference to Bantu languages is motivated by the particular clarity and richness of exemplification that these provide.) It will be seen that the concepts provided by Aikhenvald for the analysis of serial verb constructions may also be applied in the context of multi-verb constructions. The purpose of the brief account is to establish something of the semantic range of the predicates most often enlisted, and to give some indication of their typical outcomes over time.

The value of conceptualizations of the kind presented in (i) and (ii) emerges in contexts where the original or 'substantive' meanings of enlisted predicates may have become opaque, as in cases where the 'working' verb no longer has a counterpart still in use as a 'main' verb, or where processes of grammaticalization have led to the emergence of mere particles. (In other cases, a relevant and potentially cognate predicate may be found as a main verb in several

related languages, while only being enlisted for grammatical purposes in a subset of these. Aikhenvald's framework provides the theoretical basis for making the link between them.)

iii. Brief sketches are provided of verb phrase structures in KHOE and !UI-TAA languages, with particular attention to the points at which the presence (or former presence) of multi-verb formations is likely to manifest itself, in the light of insights provided by Aikhenvald. Various points of cross-SAK similarity are noted in the course of these descriptions.

iv. With the background of sections (i-iii) taken into account, it is finally possible to present a set of tables demonstrating the existence across the spectrum of the SAK languages of *morphologically* similar predicates – drawn from similar paradigm sets – and either participating in functionally similar multi-verb constructions, or else showing traces of an origin in such constructions. (Some allowance is made for the intervention over time of various processes of grammaticalization, but this apparent latitude is constrained by reference to the kinds of pathways often implicitly predicted or shown to be likely by the Aikhenvald framework.)

#### **IV.2. The typology of serial verb constructions.**

Outline of Aikhenvald's typological classification of *serial verb constructions*.

Alexandra Aikhenvald (2006) provides the definitive characterization of these constructions, as follows:

‘A serial verb construction (SVC) is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualized as a single event. They are monoclausal; their intonational properties are the same as those of a monoverbal clause, and they have just one tense, aspect and polarity value. SVCs may also share core and other arguments. Each component of an SVC must be able to occur on its own. Within an SVC, the individual verbs may have same, or different, transitivity values.’

As she adds, however:

‘In an individual language, SVCs are expected to have most, but not necessarily all, of these properties. This suggests a scalar, or continuum-type, approach to SVC – which can be either more or less like the prototype – which has the maximal properties.

From a structural point of view, it may not always be easy in reality to make a clearcut distinction between serial verb constructions (which are monoclausal by definition) and superficially similar verb sequences such as ordinary consecutive constructions, or complement-taking constructions. In part this may be because of the range of variations actually found - not only within individual languages, but also across any given spectrum of related languages. (This much is implied by some of Aikhenvald’s careful qualifications. The framework is not designed to be applied in any mechanical way, and it is not the intention to do so here.)

Concerning semantic aspects of these constructions, Aikhenvald notes that it may be equally problematic to state too rigidly that serial verb constructions necessarily have a ‘single event’ as their scope of reference, despite being ‘monopredicative’:

‘Semantically, serial verb constructions may encode one event, or several subevents closely linked together, or even several subevents in sequence which may be conceptualized as connected to each other. In the latter case, it may appear hard to draw a tight semantic distinction between a monoclausal serial verb construction and a sequence of clauses. Cross-linguistically, and even within one language, SVC’s occupy different places on the continuum, between one indissoluble event and a package of subevents all linked together. The place of a serial verb construction on this continuum correlates with grammatical parameters – such as contiguity and wordhood of components, and argument sharing.’

The identification and crosslinguistic comparison of these structures is greatly assisted by the taxonomic framework proposed by Aikhenvald, which begins with a basic classificatory distinction between ‘asymmetrical’ and ‘symmetrical’ types. In the *asymmetrical* pattern, as she defines it, there will be ‘one verb from a relatively large, open, or otherwise unrestricted class, and another from a semantically or grammatically restricted (or closed) class’. As she further notes, the verb from the closed class typically functions as a kind of specifier modifying the other (open class) verb. In the case of *symmetrical* constructions, all verbs come from ‘open’ classes.

The difference between constructions of the asymmetrical and symmetrical types has a sequel in the kinds of formalizations these may give rise to. As Aikhenvald puts it:

‘Asymmetrical serial verb constructions tend to undergo grammaticalization – the minor verb becomes a grammatical marker. In contrast, symmetrical serial verb constructions tend to become lexicalized and develop idiomatic meanings.’

She adds that these two processes of grammaticalization and lexicalization may lead to the eventual loss of active or visible serial verb constructions.

The chart [overleaf] provides a capsule summary of Aikhenvald’s semantically based subclassification of asymmetrical and symmetrical constructions. It will be appreciated that the categories set out for each type are not always hard-and-fast, so that a certain amount of overlapping inevitably occurs. The table is followed by brief notes on two further aspects of serial verb constructions, namely:

- \* Treatment of arguments associated with constituent predicates, and
- \* Monoclausality.

*Treatment of arguments associated with constituent predicates.*

Aikhenvald acknowledges that there may be some variation in the ways in which the core *arguments* of the constituent predicates are cross-referenced. While serial verb constructions are typically characterized by ‘uninterruptedness’ - this being one aspect of their monoclausality - the individual verbs may nonetheless carry interpolated concordant morphology expressing agreement with a common subject. This kind of cross-referencing serves to reinforce the semantic unity of the complex predicate, insofar as it signals the ‘sameness’ of the subject throughout. Serial verb constructions of the type that permit such inclusions are sometimes termed ‘core serializing’.

The existence of a pattern of this kind was registered by Dorothea Bleek (1939) in languages of the !Ui group. Along with other languages of this group, |Xam used the type of multiple verb constructions in which the relation to a single shared subject may be expressed by a phenomenon Dorothea Bleek described as ‘a repetition of the subject’. She illustrated this by means of the following example sentences, where underlining has been added to show the repetition:

### Asymmetrical serial verb constructions.

The first two categories below are cross-linguistically the most widespread, evidently being reported in virtually every language that uses a serializing strategy.

\* *Direction and orientation*. Typically the minor verbs in constructions of this type are verbs of motion such as 'come', 'go', 'move', 'sit', 'stand' or 'lie'. These verbs may eventually grammaticalize as 'venitive' and 'itive'-type markers of tense, but may also end up as directional morphemes of various kinds.

\* *Aspect, extent and change of state*. The minor verbs associated with this category are typically verbs of 'motion, posture, and stance', but may also include verbs with such meanings as 'continue', 'complete', or 'finish', 'start'. Constructions of this kind tend to grammaticalize into markers of tense, aspect or mood.

\* *Secondary concept serialization*. The minor verbs in these constructions are typically verbs expressing 'obligation, probability, pretend-type, beginning-type (including 'begin', 'continue', 'finish'), trying-type ('try', 'attempt'), and negators'. One sub-type of these may use verbs expressive of desire or intention.

\* *Complementation*. One of the more familiar sub-types involves verbs of speech (and sometimes perception). These tend to grammaticalize into complementizers.

\* *Valency-increasing (and argument-specifying)*. Among the most typical of the valency-increasing constructions are causatives (often based on verbs of making, doing or saying); benefactives (typically harnessing verbs of giving); instrumentals (which may exploit verbs with meanings such as 'take' or 'hold'); and comitative or associative constructions (using verbs with meanings such as 'be with'). The minor verbs typically grammaticalize into markers expressing the associated functions.

\* *Valency-reducing*. While such constructions may have a 'passive-like function', they are perhaps more commonly associated with the expression of reciprocals.

\* *Comparatives and superlatives*. Such constructions characteristically draw on verbs with meanings such as 'exceed' or 'surpass'.

\* *Event-argument constructions*. The minor verbs in such constructions essentially provide 'a manner modification to the event as a whole'. (Perhaps the only respect in which these differ from rather similar constructions of the symmetrical type is that the modifying verbs here are drawn from a restricted class.)

### Symmetrical serial verb constructions.

The sequences in symmetrical constructions may reflect a certain 'iconicity' with respect to the events, particularly in the case of the first two types. Constructions of this type are prone to lexicalization (as opposed to grammaticalization), or else may become regularized as idiomatic collocations. They typically express:

\* A sequence 'of actions or concomitant *actions related together*'.

\* Events having a *cause-effect relation*.

\* *Manner modification*.

\* *Synonymic elaboration* (or intensification) 'of two or more verbs each chosen from a semantically and grammatically unrestricted class'.

(1) !kui |á a mmai, ha |ē xhwarra,

Ha xoak̄en-gu hiŋ !hou, hiŋ |ē xhwarra.

!kui - á	a	mmai,	ha	ē	xhwarra,
Person-Fem	Past	do.first	PROIsg	enter	spring

Ha	xoa-k̄en-gu	hi-ŋ	!hou,
PossPROIsg	mother?-Assocpl	PROIpl-?	do-afterwards

Hi-ŋ	ē	xhwarra. <sup>1</sup>
PROIpl-?	enter	spring

(Note: Gender ‘I’ is the personal gender, as covertly indexed by the covarying singular/plural pronouns *ha/hi*.)

‘The girl entered the spring first, (and then) her mother-and-the-others entered the spring afterwards.’ [D. Bleek 1939]

Needless to say, the pattern described as ‘repetition of the subject’ in !Xam is not altogether different from the one reflected in a Zulu sentence such as:

(2) Ngifike ngihlale ngibuye ngisuke

Ngifik-e	ngihlal-e	ngibuy-e	ngisuk-e
1 <sup>st</sup> sg-do.first-Subjunct	1 <sup>st</sup> sg-sit-Subjunct	1 <sup>st</sup> sg-return-Subjunct	1 <sup>st</sup> sg-go.away-Subjunct

‘I first sit down and then I go away’ [Doke 1950: 203]

It seems reasonable to describe the function of the repetitive pattern in |Xam as similarly ‘concordial’ (i.e. cross-referential), and to suggest that *ha* is effectively the ‘subjectival concord’ for the 3<sup>rd</sup> person (animate) singular. As noted in an earlier chapter, this functional resemblance of a subset of !UI pronouns to Bantu ‘concord’ was commented on by Ziervogel (1955), in connection with !Xegwi. Like !Xegwi and #Khomani, |Xam had self-standing (or ‘absolute’) pronouns in addition to the dependent or concordial forms. (It is true that the ‘full’ or absolute forms of the pronouns in |Xam seem to reflect the addition of a nasal element – conceivably a ‘stabilizer’, as such particles are sometimes termed, e.g. with reference to Tswana in the South African tradition of Bantu language studies, cf. Cole 1975: 128). It may seem to be the case, therefore, that the plural pronoun *hiŋ* in the example above is an absolute pronoun rather than a dependent concordial pronoun. It is equally possible, however that the element *-ŋ* occurring between *hi* and the verb is a morpheme with some other function.)

Verb-serializing languages may have other ways of organizing and cross-referencing expressions associated with the various core and peripheral arguments (where ‘core arguments’ are those intrinsically required in terms of a given verb’s semantic specification). In some cases it may be the preferred syntactic strategy, for example, to present verbs and arguments separately, in what might be termed ‘predicate strings’ and ‘argument strings’. (This kind of arrangement is sometimes referred to as ‘nuclear’ serialization. As Solnit explains (2006), ‘nuclear’ in this context ‘alludes to the verb as the nucleus of the clause; ‘core’ refers to a verb (=nucleus) plus its core arguments’.) It follows that nuclear serialization patterns – involving verbs in direct sequence, uninterrupted by arguments - present more tightly-knit compounds, which are fairly likely to be subject eventually to specific kinds of grammaticalization. (Cf. Sebba (1995) for some preliminary discussion of argument introduction in Ju|’hoan, where terminology of this kind is used.)

Since it is not of direct present relevance, this topic will not be further discussed here, but it is one that deserves future exploration. In particular, attention might be paid to the function of serial verb constructions in not merely ‘licensing’ additional arguments, but in the grammatical indication of their respective semantic roles. It would be of interest, for example, to try and establish how an ergative system might manifest itself in languages where it is the verb rather than the noun that forms the locus of grammatical ‘case’ indications. In languages of the ‘verb-centred’ kind<sup>2</sup> (which constitute a fairly large sub-section of the languages found in Africa) it may be of greater significance how verbs are subcategorized in terms of ‘action types’ (e.g. as verbs of experience, movement, or transfer) and whether the subject of the verb is



subcategorized as <rational> (i.e. with capacity for volition) than whether a particular verb is 'transitive' (i.e. semantically specified as requiring an object). It is probable that some of the 'non-KHOE' languages in particular have at least partially ergative systems, insofar as the roles of the subject and the experiencer (or patient) seem to fall together where certain types of verb, particularly verbs of process and experience - are involved. One of the ways in which the subcategorization of verbs may find formal expression is in the choice of an associated auxiliary (which sometimes appears to have developed into a 'dummy' form now used only as a carrier of tense or aspect). It is noted for the present that the !UI-TAA languages appear to make such a 'subcategorizing' use of an auxiliary verb with the substantive meaning 'seem, feel'. (Formally similar verbs with the same meaning are also present in KHOE languages.)

#### *Monoclausality.*

As part of her definition quoted earlier, Aikhenvald points to the monoclausal (or monopredicative) behaviour of serial-verb constructions. Features contributing to this integrity are:

- i. the capacity of the verbs in such sequences to be treated syntactically as a single unit;
- ii. the assigning of 'just one tense, aspect and polarity value' to the sequence as a whole; and
- iii. the absence of grammatical expression of 'coordination, subordination, or syntactic dependency of any other sort'.

The following sub-section briefly discusses some of these aspects, making reference to various SAK languages for purposes of illustration. It will be seen that in some respects, the multi-verbal predicates of Khoesan languages do indeed show monoclausality. At the same time, there are certain areas where the individual verbs within a multi-predicate seem rather to behave like the constituents of *multi-verb* constructions - namely in their capacity for independent inflection, and in the presence of morphology that may express syntactic dependency of the linked verb.

#### *Extent to which selected Khoesan languages show true verb-serialization.*

The !Ora narratives given by Andries Bitterbos to Engelbrecht (1936) are particularly vivid in their use of multi-verb constructions (in the generic sense of the term). It is clear that these are often true serial-verb constructions.

For example, as seen in the examples below, this speaker made regular use of passive constructions showing suffixation of a V-V compound *as a structural unit*. The sequences seen to undergo such ‘unit-passivization’ (by suffixation in *-he*) mainly involve compounds where V2 is directional, but may also involve compound verb constructions with extensions. The Bitterbos texts also show cases where the applicative suffix *-ba* is appended to the verb compound as a whole. (Note: The hyphenations in each first line below are those given in the original. Double verbs are here underlined, and grammatical suffixes that apply to the sequence as a unit are shown in bold.)

ha:-!ũ-ba

COME-GO-Applicative

(3) in na ho'o |nei khoebi ha:-!ũba llaũb xu

in	na	ho'o	inei	khoe-bi	<u>ha:-!ũ-ba</u>	llaũb	xu
and	Impfv	then	other	man-3 <sup>rd</sup> msg	come-go-Applic	kraal	from

‘en dan nou ‘n ander man kom-gaan-vir van die werf af’

‘and then another man came from the kraal to fetch them’ [of cattle left in veld]

[Engelbrecht 1936: 220-222]

khau-†a-he

DIG-ENTER-Passive

(4) kx' ũesibeb hã i khau-†ahe

kx' ũesi-be-b	hã	i	<u>khau-†ahe</u>
alive-?-3 <sup>rd</sup> msg Perf		Stative dig-enter-Passive	

‘[dan] is hy lewendig grawe-ingegaan-geword’ [referring to a chameleon]

‘[then] it was buried alive’

[Engelbrecht 1936: 217-219]

Andries Bitterbos himself provided the translations into a variety of Afrikaans (in which he was equally fluent) and it is notable how consistently the directional V<sub>2</sub> components are expressly given verbal equivalents. For example, while a compound such as *ha:-!ũ-ba* (showing the applicative extension *-ba*) essentially means ‘fetch’, the translation ‘kom-gaan-vir’ (i.e. ‘come-

go-for’) given by the speaker preserves the underlying semantic complexity of the expression. (It may be the case that this was done intentionally for the benefit of the observing linguist.)

In reality, despite the fact that they may retain this property of semantic transparency, many of the more frequently used compound verbs of the Khoekhoe languages give the impression of being fully ‘lexicalized’, in the sense that their resulting meanings have a ‘gestalt’ quality not predictable from the constituent parts of the complex, as would be the case where the minor component had become established as either derivational (adding a consistent element to the meaning) or inflectional (adding a consistent grammatical implication). This factor is even explicitly taken into consideration (*Khoekhoegowab Orthography 3*, 2003: 52) when it comes to orthographic determinations concerning whether or not to hyphenate. The authors (Curriculum Committee for Khoekhoegowab) note:

‘Compounded verbs are written conjunctively if they are merged into one concept. [...] If the conjunction *tsî* could be inserted between the two verbs then they do not form a single concept and are thus written apart.’

Using Aikhenvald’s terms of reference, lexicalized compound predicates of this kind are most likely to arise from the symmetrical type of serial verb construction, though it is also possible that they may develop from the asymmetrical category that likewise involves ‘manner’ modifications, but which draws on a limited set of predicates for the purpose. While the verbs that participate in forming the ‘double verbs’ of Khoekhoe languages certainly belong to a rather large class, it is possible, nonetheless, that the set is finite. (It is notable that the verbs most frequently enlisted are the predictable verbs of motion, posture and direction, which are in any case probably limited in number.)

In the case of both JU and !UI-TAA languages, at least a few of the most frequently used complex verbs appear to be similarly lexicalized. Some of the V-V compounds in Ju|’hoan, for example, appear in Snyman’s dictionary (c. 1975) as entries in their own right:

**Fig.IV.5.** Lexicalized V-V compounds in Ju|’hoan, after Snyman (1975: scattered).

tsí-g àe	‘come’ + ‘arrive’	>	‘arrive’
n!òm-tsau [sg <i>subj</i> ]	‘fly/drift/creep’ + ‘rise’	>	‘cease, stop doing’
tàni-ce	‘bring’ + ‘return’	>	‘bring back’

These semi-regularized compounds mainly involve directional predicates as V2. Similar examples can be found scattered throughout Traill's dictionary (1994) for the TAA language, !Xóǀ.

In the case of the !UI-TAA languages, however, not all of the 'double verbs' have a straightforward V-V structure. For !Xóǀ, as has previously been mentioned, Traill notes (1994: 32) that verbs in sequence may be 'linked by a particle *kā*'. In the !UI languages, not only are there similarly traces of connecting morphology, which may indicate *syntactic dependency* of the linked verb, but some of the !UI constructions even seem to show a capacity for *independent inflection* of the constituent verbs. The significant implication of this is that the patterns concerned may not be strictly verb-serializing, but may rather involve multi-verbal constructions of the Bantu type.

The following sentences from !Xam suggest independent inflection of this kind:

(5) hǎ ká hǎ ssě orrúko !kúxe !khwā,

hǎ ssě llǎ ʿwā

hǎ ká hǎ ssě orrú-ko !kúxe !khwā

PROIsg Pot PROIsg Fut do.quickly-? run.to water

hǎ ssě llǎ ʿwā

PROIsg Fut go drink

'it [the lion] would quickly run to the water,

'that it might go to drink'

[*Specimens*: 178-9]

The first instance of *ssě* appears to be the venitive Future auxiliary appearing in a subjunctive form because of its subordination to the modal auxiliary *ka* ('wish'). It is notable that the itive auxiliary *llǎ* in the second line *itself shows inflection* by means of an auxiliary, here again *ssě*, again in the subjunctive form of *saa*. (Constructions of this kind are reminiscent of equivalent patterns in the multi-verb conjugations of the Bantu languages, where the equivalent verbs are

similarly itive; cf. Tswana *-ea* < *-eta* < PB \*-gènda ‘go’ and venitive (cf. Tswana *-tla* < PB \*-jjja ‘come’.) The modal *ká* in the example above seems to reflect, unremarkably, the grammaticalization of a desiderative verb.

In the example quoted above, the adverb *orrúko* appearing in the slot just before the main verb *!kúxe* ‘run to’ is possibly verbal in origin, and may have been used to express a fairly precise micro-distinction of aspect. (In the case of Bantu languages, similar grammatical distinctions are often all but lost in translation into European languages, or, if they are rendered at all, are expressed by adverbs.) The particle *ko* is probably a separable morpheme, and is conceivably associated with a following infinitive complement. (The verb *!kúxe* may well be a compound predicate itself, given that *!kũ* (or *!kʔũ*) in |Xam meant ‘move away, forward’ (*Dictionary*: 446), and *!ʔo* in #Khomani meant ‘jump, spring’; while *!kũ* was recorded in a variety of JU (‘NII’) by Lucy Lloyd as a verb with rather a wide range of meanings, ‘to run, jump, go, come’. In modern Ju|’hoan, the word for ‘jump’ is *khù*.)

### V.3. Multi-verb constructions.

Since there may be grounds, as noted above, for interpreting some of the patterns in Khoesan languages as multi-verbal rather than serial verb constructions, it may be useful to provide a brief background account next of *multi-verb constructions* of the kind found, for example, in the modern Bantu languages (or some Nilo-Saharan languages)<sup>3</sup>. These constructions are usually assumed to be precursory to the emergence of serial verb constructions, and in some contexts the label ‘multiverb constructions’ may even double as a kind of superordinate term, with the label ‘serial-verb constructions’ indicating only a specific sub-type or development.

As far as the Bantu languages are concerned, it is really only in the inherited verb extensions that one sees any traces of what might formerly have been serial verb constructions (and which must themselves have emerged during the course of some early cycle of grammaticalization). For the most part, the Bantu languages are characterized by an extensive range of *multi-verb constructions*. Given the probable link between multi-verb and serial verb constructions, it is unsurprising that multi-verb constructions in the Bantu languages are used with almost the same range of functions as those described by Aikhenvald for serial constructions. It may also be

material gives a partial illustration of how the same basic root may be used in different inflectional forms.

**Fig.IV.6.** Verbs used in the multi-verb conjugation of Sotho, after Doke and Mofokeng (1985: 245-298).

I. Deficient verbs with full <u>participial complement</u> .		Implication
Source verb and meaning		
i.	-se (? < <i>setsē</i> < <i>-sala</i> )	'be doing now, already'
ii.	-ne (< <i>-na</i> )	'past incompleted'
iii.	-be (< <i>-ba</i> )	'subjunctive, future incompleted'
	-tla-be	'future'
	-ka-be	'potential'
II. Deficient verbs with <u>past subjunctive complement</u> :		
i.	-ile (< <i>-ëa</i> < PB * <i>-gènda</i> 'go')	'past completed'
ii.	-ka	'emphatic'
iii.	-tla (< <i>-tla</i> < PB * <i>-jja</i> 'come')	'do lest, or else', 'preventive'
III. Deficient verbs with <u>perfect subjunctive complement</u> :		
i.	-ëe	'do habitually, be wont to do'
ii.	-be (< <i>-ba</i> )	'even do habitually'
iii.	-hle (< <i>-hla</i> )	'do habitually'; 'do right away'
iv.	-ne (< <i>-na</i> )	'do habitually'
v.	-ke (< <i>-ka</i> )	'act occasionally'
IV. Deficient verbs followed by full sequence formations:		
i.	-ba	'do moreover, even'
ii.	-hla	'do indeed'
iii.	-mpa	'do nonetheless'
iv.	-na (cf. Tswana <i>-na</i> 'sit, settle, remain')	'act continually'
v.	-bōela (< PB * <i>-būeda</i> 'go home, return')	'do again, repeat'
vi.	-eketsa ('add, increase')	'do further, besides'
vii.	-fēla ('expire, end')	'do indeed, in reality'
viii.	-fihla (< PB * <i>-pika</i> 'arrive')	'do straightaway'
ix.	-phakisa ('hurry, hasten')	'do soon'
x.	-phēta ('repeat, narrate')	'do again, repeat'
xi.	-ke	[> emphasis in purpose]
xii.	-nyafa	[> opportune action]
V. Deficient verbs followed by <u>present participial complement</u> :		
i.	-batla ('seek, desire, want')	'act almost, nearly'
ii.	-hlōla ('sojourn, spend the day, spend time')	'act repeatedly, permanently'
	(cf. Tswana <i>-lhōla</i> , ? < PB * <i>-tūda</i> )	
iii.	-lala (< PB * <i>-dáada</i> 'lie, spend the night')	'act through the night'
iv.	-sala (< PB * <i>-jikada</i> 'stay, remain')	'act eventually, later'
v.	-tlōha ('go away, depart'; ? < PB * <i>-tūka</i> )	'do afterwards'
	(cf. Tswana <i>-tloga</i> )	
vi.	-tsōa ('emerge, leave, go'; < PB * <i>-dua</i> )	[> immediate Past]
	(cf. Tswana: <i>-tšwa</i> > ingressive)	
vi.	-tsōatsōa	'act in vain, without result'
viii.	-tsōha (< PB * <i>-būka</i> 'wake up, rise')	'act in the morning, early'
	(cf. Tswana <i>-tšoga</i> )	
ix.	-tšōha ('be startled'; ? < PB * <i>-jitūka</i> )	'act suddenly, unexpectedly'
VI. Deficient verbs followed by <u>infinitive complement</u> :		
i.	-anēla ('spread over, suffice')	'act merely, barely managing'
ii.	-atisa (< PB * <i>-jánda</i> 'increase')	'do frequently'
iii.	-rata (< PB * <i>-tanda</i> 'love, wish')	'be on the point of doing'
iv.	-tšōanēla (< PB * <i>-pūana</i> 'suit, befit')	'do of necessity'

(What the table does not reveal is that, in Sotho, the individual verbs in these constructions may in turn be still further inflected – independently – for tense and aspect.) The etymologies in brackets are those suggested by Doke and Mofokeng themselves (pp.247-298), or alternatively those implied by Cole’s interpretations (1975: 286-310) of their cognate forms in Tswana. (The Proto-Bantu forms are added where they seem reasonably certain as the relevant underliers.)<sup>4</sup>

The list for Sotho may not even be exhaustive, since other instances of verbs which may be used ‘deficiently’ are found scattered throughout Mabile and Dieterlen (1988). For example, these authors (p. 418) give the entry *-raka* ‘arrive before, precede, forestall’, but note that the same verb can be enlisted in an auxiliary capacity to imply that an action transpires ‘quickly, before anything happened’, as in their example:

(6) a raka a aba letlalo

a-raka	a-aba	le-tlalo
Cl.1.POT.(?)-do.preemptively	Cl.1.POT.(?)distribute	Cl.5-skin

‘he quickly gave the skin away (before he was found out)’.

(The use of a disjunctive convention in this case creates the impression that the subject concordial pronominal forms are independent.)

As is to be expected, many of the same words (i.e. direct cognates) are similarly used in other languages of the Sotho-Tswana group and Kgalagadi. Nonetheless, the grammatical implications that are supplied by related verbs within this group can at times be surprisingly divergent, while there are occasional overlappings of form and meaning that are not always easy to unravel (cf. the words in section V, numbers v to ix). Where Sotho uses *-tsōa* ‘leave, go from’ to imply ‘do afterwards’, or ‘meanwhile’, Tswana may use the equivalent *-tšwa* with an inceptive implication. (A very similar form – with similar ‘ingressive’ meaning - is found in almost all Khoesan languages.) The Sotho *-tlhōla*, like Tswana *-tlhōla* seems to arise from PB \*-tʷuda (a stem which is interesting in itself for the fact that is reconstructed in already-derived form, i.e. as the lexicalized form of a verb plus extension). Outcomes of this verb have semantic

implications such as ‘sit, offload, rest, settle, stay, live’. Whereas the Sotho form is used to add the micro-distinction, ‘act repeatedly, permanently’, the Tswana counterpart (used also in inflected forms such as *-tlhôle* and *-tlhôtse*) is used deficiently in conjunction with participial complements to add a range of rather diverse implications, which include ‘doing constantly, continually or repeatedly’. (Venda has an equivalent *dzula* (and *-dzulela*), where this verb has the basic meanings ‘sit, stay, live’, but is used in deficient contexts, likewise with participial complements, to express a similarly progressive implication ‘continuously, always’ (Poulos: 325). Venda also has the synonymous *-twa* (? < PB \*-twea) and its extended form *-twela* ‘spend the day’, which are likewise used deficiently with participial complements, to give rather similar implications of ‘doing continually’. The equivalent Shona verb *-swera* ‘pass the time, spend the day’ seems to be the direct counterpart of *twela*. Other verbs enlisted in Shona to express an ongoing action are *-pota* and *-ramba*.)

An equally extensive list of words can be compiled for Nguni languages such as Zulu and Xhosa, and other languages of the southern region. In some cases, however, the enlisted verbs include some that differ from those used in Sotho-Tswana languages. In the construction of negative commands, for example, Nguni languages typically use the auxiliary *-musa* ‘send back’, where Sotho-Tswana languages (and some varieties of Shona) use *-rega* ‘cease, omit, leave alone’. What is more, even where the verbs themselves are cognate, their grammatical implications may differ. Zulu, for example, may use *-fike* (< PB \*-pika ‘arrive’) to imply ‘do first’, whereas the cognate *-fihla* in Sotho is used to signify ‘do straightaway’. In Zulu, *-buye* (< PB \*-bùeda ‘go home, return’) may be used as an auxiliary to imply ‘do next’, whereas the equivalent *-bōèla* in Sotho means ‘do again, repeat’. In Venda, *-vhuya* ‘go home’ may be used in the auxiliary context to mean ‘once’ (i.e. in association with a past tense), ‘eventually’ (in a future sense) and ‘never’ (in conjunction with a negative).

A few further applications of multi-verb constructions not illustrated in the table, but nonetheless found not only in Sotho but in many other Bantu languages include the use of :

- \* verbs of speech or perception, e.g. outcomes of PB \*-tì- ‘say’, particularly in a complementizing role;
- \* verbs of surpassing or defeating, e.g. outcomes of PB \*-píta or \*-dùta ‘surpass’, in comparative constructions.



In some cases, the meaning of a verb as a main predicator may seem to bear only the faintest relation to the implication of the same verb when used in a grammatical role. In his pioneering study of Xhosa, Appleyard described these ‘idiomatic verbs’ (1850: 354) as having ‘a peculiar application of their meaning, when found in combination with others.’ The grammatically employed verbs identified by Appleyard included amongst others: *-alekela* ‘to add to’ (> ‘again, also’), *-buya* ‘return, go home’ (> ‘again, afterwards’), *-hlala* ‘sit’ (> ‘constancy, regularity’), *-sala* ‘remain’ (> an action that has already or simultaneously taken place), and *-pinda* ‘repeat’ (> ‘again’).

While the probable source verbs are apparent for some auxiliaries, even if their grammatical applications are not always immediately explicable, this is not so in every case, as with some of the Zulu examples given by Nyembezi, illustrated below:

**Fig.IV.7.** Examples of auxiliary verbs used in the multi-verb constructions of Zulu, after Nyembezi (1970: 193-213).

<i>With subjunctive complements.</i>		
-simze	>	‘do merely’
-suke	>	‘do of a sudden’
-ze	>	‘never, until, lest, eventually’
-hle	>	‘likely to happen’
-vele	>	‘do simply, from the outset’
-mane	>	‘do simply, unnecessarily, rather’
-nele	>	‘as soon as’
-ke	>	‘do occasionally, for a while’
-fike	>	‘do on arriving, do first and then’
-qale	>	‘do first’
-phinde	>	‘do again’
-ngeke	>	‘never’
-dlule	>	‘do nevertheless’
-cishe	>	‘nearly, be on the point of’
-buye	>	‘and again’
-kaze	>	‘never’
-zange	>	‘never’
-sheshe	>	‘do quickly’
-yaye	>	‘do habitually’
-thi	>	‘almost’
<i>With infinitive complements.</i>		
-vama	>	‘usually’
-ephuza	>	‘delay’
-phonse	>	‘almost’
-sanda	>	‘just taken place’
-anele	>	‘as soon as’
-kholisa	>	‘usually’
-thi	>	‘do a little’

Constructions of the periphrastic multi-verb kind described above inevitably tend, no less than serial verb ones, to become regularized over time. One frequently seen development is the omission of subject concordial morphology, particularly in extended multi-verb sequences. In addition, verbs in regular grammatical use may fall away from the ordinary lexicon and their original meanings become lost or changed; while their actual phonetic substance may be altered through processes of elision, assimilation and coalescence, so that the original verbs (plus any associated constructional morphology) may end up as semantically opaque particles. The following notes briefly describe some common processes of attrition.

It has long been noted that the various particles which may appear in certain pre-stem ‘slots’ of the Bantu verb in the simple conjugation are in all likelihood the fossilized outcomes of earlier compound formulations. O’Neill, for example, commented more than seventy years ago (1935: 37) on the future particle *-zo-* of Zezuru, noting its probable emergence from an earlier sequence *-za-ku* (where *ku-* is the infinitive prefix of the following verb), and adding: ‘*-Za* is a verb, no longer used in Zezuru, meaning “Come,” and in this dialect it is found only in its auxiliary form *-zo-*.’ Some brief discussion of the phenomenon appears also in Nurse and Muzale (1999) - who describe the *ku-*complements as ‘locatives’; and Botne (1999), who discusses two uses of *-ka-* (as a ‘distal marker’ and as a particle of Tense with Future implication); while Güldemann (1999b) discusses verbal origins of the negative particles used in main and subordinate clauses.

Concerning the itive and venitive verbs found in Tswana as *-ya* ‘go to’, and *-tla* ‘come’, Cole notes (1975: 309) that in some of the eastern dialects (such as Kgatla) ‘there is a common tendency to assimilate the final vowel thereof to that of the following infinitive prefix; very frequently the infinitive prefix itself is elided’. This gives rise to successive contractions of the following type, where the final stage appears to have retained only a few phonological and prosodic traces of the former ‘syndetic’ (i.e. grammatically linking) morphology:

(7) Ke-ya- go-m-môna > keyô gommôna > keyô:mmôna

‘I am going to see him’.

In the example above, *go-* (where 'g' = /x/) is the infinitive prefix, 'm' is the pre-stem object concord (Class 1). The open vowel represented by 'o' is the outcome of vowel coalescence at the boundary of the itive verb and the infinitive prefix of the following subordinated verb, and the colon in the last form shows lengthening of the vowel in compensation for elision of the infinitive prefix. The overall effect is to create a seeming V-V sequence 'GO-SEE', with interruption only by the concordial morphology that indexes the object of the second verb. In other words, attritional processes may combine under some circumstances to create an illusion of 'serial-like' constructions.

The tendency for a following infinitive prefix to become incorporated is even stronger in languages where this prefix is expressed with a glottal fricative (or even zero) as initial segment. Venda, for example, has an infix auxiliary particle *-toɔu-* which implies 'almost, nearly'. This infix arises, however, from a former multi-verb construction based on *-toɔa* 'want, desire' plus a following infinitive complement (Poulos 1990: 354). Since the infinitive prefix in Venda is merely *u-*, coalescence has led to the formation of the fused particle now seen.

In the case of the various language clusters united as 'Shona', processes of grammaticalization have created what are now for the most part merely particles embeddable into the simply conjugated form of the verb. The range of these different auxiliary particles is so great that Dale (1974: 58) was led to remark:

'To give an adequate exposition of infix verbs in a few pages is an impossible task, particularly as subtle combinations with other infix verbs add so many different shades of meaning.'

Not only are the grammatical nuances they contribute extremely fine-grained, but the forms and meanings of the original verbs may be hard (if not impossible) to discern. It is of particular relevance to note that these formerly verbal but now grammaticalized *pre-stem morphemes* are typically translated by means of *adverbial* expressions.

In the remaining sections of this chapter, brief sketches will be provided of verb phrase structures in selected examples in JU, !UI-TAA and KHOE languages. Particular attention is given to those 'slots' likely to manifest a presence (or former presence) of multi-verb predicate formations of the kind described and illustrated above; and various points of cross-SAK

similarity are noted. These are followed by the main consolidated table, which presents some of the verbs most commonly enlisted in Khoesan languages for grammatical purposes of the kind described above. It will be apparent on inspection that there are strong cross-SAK resemblances in the actual morphological substance of these stems.

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#### **IV.4. Aspects of multi-verb constructions in JU and !UI-TAA languages.**

This part of the chapter begins with a few preliminary notes on general aspects of the verb and verb phrase in selected JU and !UI-TAA languages. This section is followed by more specific notes on the structure of the verb and verb phrase in representative languages.

##### IV.4.i. A few preliminary observations on general aspects of the verb and verb phrase in JU and !UI-TAA languages.

For purposes of the discussion below, the languages mainly illustrated are Jul'hoan (JU), !Xóǀ (TAA) and |Xam (!UI). Although obviously not comprehensive, the treatment at least spans the three major groups in a reasonably representative way.

All of the 'non-KHOE' SAK languages appear to have a few basic morphemes of tense, aspect and modality. These are supplemented by a considerable range of additional morphemes, which appear in some cases (e.g. in Jul'hoan) to be purely adverbial, but which are verbal (or at least fairly clearly deverbative) in others (e.g. !Xóǀ and |Xam). The verbs typically involved include:

- \* venitives and itives,
- \* postural verbs with underlying meanings such as 'sit', 'stand', 'lie',
- \* verbs of process with underlying meanings such as 'sojourn', 'arise', 'leave', 'remain', 'wait', 'do first', 'return',
- \* verbs of subjective attitude, with underlying meanings such as 'desire',
- \* verbs of manner and sequence,
- \* verbs of perceiving, doing, and speaking, and
- \* verbs of direction

It is not uncommonly the case that the precise nuance given by a particular auxiliary may all but elude translation into English. In the case of Jul'hoan, for example, Dickens (2005: 83) noted:

‘.. verbs of coming and going, for example g!àè (ordinary meaning ‘arrive’) are frequently used as the first in a serial construction, but without much meaning. This usage can be compared to that of ‘went and’ in an English narrative such as “.. we were all just sitting there and suddenly she went and poured her drink over him”.’

It has previously been noted that in many (possibly all) of the JU and !UI-TAA languages, a certain subset of verbs have suppletive forms. (The determining feature is usually analysed as that of number. In the case of verbs used intransitively, it is the number of the subject that determines the alternation; while in the case of transitive verbs, the determining factor is the number of the object. As noted elsewhere, the same pattern is seen in Sandawe.) The verbs that participate in these suppletive patterns turn out to be among those often enlisted for grammatical purposes in multi-verb constructions. This provides some support for the idea that verbs prone to this kind of special enlistment may legitimately be regarded as members of limited – if not strictly closed – classes. The table below shows examples of verbs with suppletive forms in Jul’hoan:

**Fig.IV.9.** Examples of Jul’hoan verbs with suppletive singular and plural forms, after Dickens (2005: 87).

<i>Intransitive verbs (verbs of process).</i>		
	Singular subject	Plural subject
sit	n áng	g!hòó
stand	n!ún	g!là
lie	cú	g#à
go out	g!ái	g!à'í
rise	tsáú	tuih
go down, fall	n#hao	tàqm
die	!ái	!àò
<i>Transitive verbs (verbs implying active instigation).</i>		
	Singular object	Plural object
take	gù	n hui
kill	!hún	!'óán
put down	n!áng	g!là
break, snap	!ò'á	xái

Similar suppletive patterns are found also in the TAA language, !Xóǝ, as illustrated by the examples below.

**Fig.IV.10.** Examples of !Xóǝ verbs with suppletive singular and plural forms, extracted from Traill (1994).

	Singular subject	Plural subject
sit	tshûu	!ʼáã
stand [ <i>intrans</i> ]	llhûû	?llnûhã
lie [ <i>intrans</i> ]	tûu	‡q'âu
lie horizontal	?!nàhã	‡q'aa (also 'lay horizontal' [ <i>trans</i> ] [ <i>pl</i> ])
go in	ûlu	!gá'o
put in	llháa	!gá'o
come out	?‡nâla	!ûã
take out, off	?nâla	‡náu
take	llʼáǝ	lhàǝ
rise	kx'âba	llxóbe
go down, fall	!hài (tí)	llʼáli
put	llʼúma	llqhûã
run, chase	llnûu	llgâba
live	!núm	!núŋa
break	llʼála	llʼáli

As noted above, the verbs that participate in these suppletive patterns are not uncommonly amongst those enlisted for grammatical purposes. (The same property incidentally characterizes those verbs with suppletive plural forms in Sandawe.) Given that intransitive verbs tend to be verbs of process – such as verbs of postural change and directional

movement, as well as verbs of experience – while transitive verbs tend to be verbs describing actions, it is worth bearing in mind that there may be a further distinction in play, concerning the animacy (and hence capacity for active instigation) of the primary argument.

IV.4.ii. Specific notes on the structure of the verb phrase in representative JU and !UI-TAA languages.

The sub-section for each example language below describes basic morphemes of tense and aspect, and then describes the grammatical roles of various kinds of multi-verb construction in expressing:

- \* modality,
- \* micro-distinctions of tense and aspect,
- \* manner and direction

The presence of extensions may also be indicated, particularly where the morphology appears to have a verbal origin (having arisen by conventional processes of grammaticalization). In several instances even the basic morphemes of tense and aspect show traces of such an origin, particularly in verbs of the venitive and itive kind. Some languages also show an unexceptional use of basic postural verbs (e.g. with meanings such as ‘sit’ or ‘stand’) as locative existential predicators. Lastly, it will be seen that several of the illustrated languages have a small set of negative verbs which may be used ‘antithetically’, i.e. to supply the negative counterparts of certain basic verbs of existence and capacity (where the latter are not negated by the usual negative morphology). All of these aspects of grammatically employed verbs in ‘non-KHOE’ languages have their counterparts in corresponding structures in KHOE, as will be seen in a subsequent section. The resemblances are not merely of the predictable functional kind, but repeatedly involve similarities in form, as will be apparent on reference to the Main Tables for this chapter.

**JU.**

The information provided below is based on material from and analyses of Ju|’hoan in Snyman (1970), Van der Westhuizen (1972) and Dickens (2005). The basic *order* of the sentence is SVO, although inversions are occasionally seen in Snyman’s data in the case of certain types of secondary clauses, such as complements, where an OV pattern may occur. (The second example below provides an instance of the latter.)



**Fig.IV.11.** The basic structure of a sentence in Juǀ'hoan.

(AdvP)NP (Adv) AUX V(-V)(-Ext) NP (Adjunct)

The following example sentences (from Snyman, but with orthography modernized to conform to Dickens 1994) illustrate the pattern:

(8) Mi ǀxàè ll'ámá !xái-ya ji

Mi	ǀxàè	Ø	ll'ámá	!xái-ya	ji
PossPRO1 <sup>st</sup> sg	daughter	Pres	buy	cloth-REL	green
<b>Subj</b>		<b>Aux</b>	<b>V</b>	<b>Obj</b>	

‘My daughter buys a green cloth.’ [Snyman 1970: 105]

(9) Mi tsú kxóá [kx'wa] màri khàmà ha kàrè zó ll'ámá.

Mi	tsú	Ø	kxóá	màri
PossPRO1 <sup>st</sup> sg	uncle	TAPres	seek	money
<b>Subj</b>		<b>Aux</b>	<b>V</b>	<b>Obj</b>

khàmà ha kàrè [zó ll'ámá].

CONN	PRO3 <sup>rd</sup> Isg	want	[honey	buy]
+	<b>Subj</b>	<b>V</b>	Obj [Obj	V] Obj

‘My uncle is looking for money because he wants to buy some sugar (lit. ‘honey’).’ [Snyman 1970: 187]

*Basic morphemes of tense and aspect.*

The slot for an ‘obligatory’ auxiliary element may in fact contain a ‘zero’ morpheme in the case of the simple present tense. Basic distinctions of tense, aspect (and apparent modality) in Ju|’hoan are expressed by means of the following particles. The diagram is based on a synthesis of information from Snyman (1970), Van der Westhuizen (1972) and Dickens (2005).

**Fig.IV.12.** Basic particles of tense, aspect (and apparent modality) in a JU language.

∅	Present
kòh	Past
kà (~ gà)	Future
ní kò	Quasi-modal auxiliary expressing anterior future perfect (‘would’).
kú	Generally occurring immediately before the verb, this particle expresses a progressive (or ‘imperfective’) aspect, and may be used in all tenses.

It seems notable that in the !UI language, |Xam, a modal form *ka* is used to express a type of future ‘irrealis’, and may be underlyingly a verb of capacity (i.e. potential) or desire (i.e. future intention). The future particle *kà* in Ju|’hoan may be its direct counterpart, given the crosslinguistic tendency for morphemes with potential or future ‘irrealis’ modal implications to develop into particles of future tense.

*Adverbs.*

As noted above, more complex implications of tense and aspect may be expressed by the semi-formalized use of certain adverbial expressions. The example below from Snyman (1970: 148) shows the potential use of such an adverb (*za'aha*) in the *preverbal slot*, i.e. after the ‘imperfective’ (i.e. progressive) *kú*, and immediately before the verb. (Note, however, that examples in Dickens (2005: 26) suggest that the occurrence of *kú* in positive sentences is largely confined to the slot before the verb.)

(10) Nama kú za'a/ha |òrè ðxanù

Nama	kú	za'a/ha	òrè	ðxanù
N	Impf	Adv	V	N
Nama		long ago	write	letter

'Long ago the Nama wrote a letter.'

[Snyman 1970: 148]

The two slots termed 'Adverbial' seem to be reserved on the whole for morphemes expressing distinctions of tense and aspect. From a semantic point of view, some of the micro-distinctions reflected are similar to those conventionally expressed by means of multi-verb constructions in some Bantu languages. (The latter, as has been seen, typically grammaticalize into preverbal morphology susceptible to quasi-adverbial interpretation - particularly in the context of translation into European languages.)

The following list (based on data provided by Snyman (1970: 145-174), but with orthography adapted as far as possible to conform to the modern standard) shows some of the temporal and 'descriptive' adverbials of Ju|'hoan. As the table indicates, some of these adverbs were found by Snyman to occur specifically in the pre-verbal position.

Fig.IV.13. Adverbs of Ju|'hoan, after Snyman (1970: 145-174).

ka	'now'	kámáhá	'firstly'
g#haã	'long ago'	toandi	'finally'
kaaqa	'long ago'	ll'à	'then'
za'aha	'long ago'	tsé	'then'
goàq	'long ago'	n!hoe	'shall, will (rem.Fut)
kx'ái-cè	'firstly'	cíní-hà	'still, when'
<i>Specifically pre-verbal.</i>			
nìcè	'nearly'	n!obe	'badly, evilly'
kòè	'thus'	sī	'must'
cè tè, cè ká	'again, also'	kái-cè, kái-sí	'much'
táa	'apart, independently'	llxòàsi	'usually'
tía	"	lloeh	'but'
lleu	'well'	kúmá, khòè-cà	'perhaps'

*Main verb.*

The slot for the main verb may be filled by a compound predicate, where one of the potential V<sub>1</sub> terms is the causative *n#ái*.

(11) N!aroh-kx'àò n#ái-gè'é-ya da'àbi

N!aroh-kx'àò	Ø	n#ái-gè'é-ya	da'àbi
N-N	Pres	CAUS-V-a	N(Suppl.PI)
teacher		cause sing	children

'The teacher makes the children sing.'

[Snyman 1970: 130]

An alternative auxiliary used in causative constructions is *dù* ‘do, make’. Examples given by Dickens (2005: 85) include:

(12) Bòhá dù |'hùrù útò !óm

Bòhá dù |'hùrù útò !óm  
nail make be.punctured car wheel

‘The nail caused the wheel to be punctured’ [Dickens 2005: 85]

In the case of the !UI language, |Xam, a similar type of construction is seen, where the verb enlisted is *di* ‘do, make, become’. The verb *dī* ‘do, act’ is likewise enlisted to add what may be an ‘ergative’ (or ‘consciously instigated’) implication to certain verbs of process in Khoekhoe.

*Post-verbal extensions.*

The verb stem may be extended by morphology of the typical valency-modifying kind, where these extensions show traces of verbal origins. It has been suggested, for example, that the applicative or benefactive extension (-|’a) may arise from a verb meaning ‘give’.

The morphemes shown next are the verbal extensions identified by Snyman (1970: 150). It will be noted that the first four appear to be valency-modifying, while the last two express some negating factor. (The examples below reflect Snyman’s choice of a conjunctive representation for the extensions, but the orthography has otherwise been adapted to match that of Dickens 1994, 2005.)

**Fig.IV.14.** Verbal extensions of Ju|'hoan, after Snyman (1970: 150).

-llk'áé	[Snyman: -llx'ae]	'be together, complete'
-khòè		'each other, one another' (> reciprocal)
- xòà	[Snyman: - xwa]	'with' (> instrumental, accompanitive')
- 'àn	[Snyman: - 'a]	'for, on behalf of' (> benefactive, 'applicative')
-tàm		'not know' > 'do unsuccessfully'
-nll'ho		'aimlessly'

The use of the instrumental extension is illustrated in the sentence below:

(13) Guni-kx'áo |xái-|xòà !ú!ù

Guni-kx'áo |xái-|xòà !ú!ù

hunter cut-INSTR spear

'(The) hunter cuts with (his) spear.' [Snyman 1970: 150]

The similarity of the morphology used for the instrumental -|xòà [-|xwa] and applicative -|'àn [-|'a] extensions seems noteworthy because of the potential it suggests for convergence. This is particularly of interest, given that the !Ui language, #Khomani (and probably other languages of the broader N|uu cluster) appear to have a greatly reduced set of such morphemes for the introduction of a range of peripheral arguments. The likelihood suggests itself that some degree of syncretism has taken place in the !UI languages, and that all of the 'non-KHOE' languages once had a full set of such extensions. What is more, some of the extensions still visible in the JU languages can reasonably be said to bear a resemblance to equivalent morphology reconstructed for the KHOE languages (shown later).

As seen above, certain types of negative may be expressed by a verbal extension (typically where the scope of the negation is the verbal predicator itself). The following example

shows the use of the verb *tam* ‘not know’ in the capacity of a post-placed negative verbal auxiliary:

(14) N!aroh-kx'àò n!aroh-tàma mí tshín

N!aroh-kx'àò	n!aroh-tàm-a	mí	tshín
N-N	V-Ext-a	PossPRO1 <sup>st</sup> sg N	
teacher	teaches-unsuccessfully-?	my	brother

‘The teacher fails to teach my brother.’ [Snyman 1970: 151]

Other morphemes may be used to express a more general type of propositional negation; while a negative command may require the use of a negative auxiliary.

Snyman (1970: 154) identified a number of ‘negative adverbs’ (some of which appear to be allomorphs of a single term), as: |wa, |wi, |eu, |a, |ao and |u. (In the new orthography of Dickens, the symbol ‘w’ may be replaced by ‘o’, so that the standard representation of the negative particle is now |óá.) The example below shows how this morpheme is used in the pre-verbal adverbial slot:

(15) Mi !úi |óá n|óán !há

Mi	!úi	óá	n óán	!há
PossPRO1 <sup>st</sup> sg	sister	NEG	cook	meat

‘My sister does not cook meat.’ [Snyman 1970: 154]

It is notable that the TAA language, !Xóǝ, has an apparently similar negative morpheme ||qhúa, used as in the following example:

(16)  $\bar{n}$  à llqhúa |née ?Onàje

$\bar{n}$                       à              llqhúa |naV                      ?Onàje

PRO1<sup>st</sup>sg      Past    NEG    see-[3]                      tree[3]

‘I did not see the tree’

[Traill 1994: 119]

**Note to (16).** The termination of the transitive verb in !Xóǝ is modulated to reflect ‘agreement’ (or harmony) with an object noun, in this case a singular noun of the gender coded by the pronouns *èh/àh*, hence in Traill’s concordial sub-class ‘3’ (associated with cross-referencing by the pronoun *èh*).

A negative imperative in Ju|’hoan makes use of a sentence initial auxiliary. In this case, the auxiliary used is the verb *nlla* ‘leave’. Its use is shown below, in a sentence that also conveniently illustrates the benefactive extension.

(17) Nlla h̄are|’a !’hwã ko g!u. [Snyman’s orthography]

Nllah                      h̄aq’aré-|’àn                      !’hoàn kò      g!ú

NEGImp      fetch. water-BEN      man    KO      water

‘Do not fetch water on the man’s behalf!’      [Snyman 1970: 145]

Dickens notes (2005: 43) that the negative imperative may also be expressed by *nllah kú*, adding that this form ‘is usually contracted to *nllaiú*’. It will be seen below that similar verbs are associated with negative implications in !UI-TAA; while a verb *llnã* meaning ‘leave alone’ is also found in Khoekhoe.



*Adverbs of direction.*

The slot here termed ‘Adjunct’ may contain a monomorphemic adverb, or an adverbial phrase. Where the adverbial phrase is used to express a locative or other peripheral argument not already licensed by a verbal extension, it is introduced by a special complementizer, *kò* (seen in the two examples above). (This particle was identified by Dickens (2005: 45) as a ‘transitive particle with locative significance’.)

While the adjunct in Ju|’hoan may contain simple or phrasal adverbial expressions of a qualitative or temporal kind, it may also be used for the introduction of additional arguments of a locative kind. In such cases, the locative morphemes used are generally of the *denominative* kind. However, many more directional implications are expressed in Ju|’hoan (as in the TAA and !UI languages) by a modification or extension of the verb itself. These involve *directional predicates* used in sequence with the main verb – i.e. in serial verb constructions. (It is probably not unusual for languages to reflect both denominative and deverbative locative elements. For example, Proto-Indo-European seems to have enlisted directional verbs to express a range of locative implications, cf. PIE \**h<sub>4</sub>upó* ‘up’ from a verbal root \**h<sub>4</sub>up-* ‘go up’ (Mallory and Adams 2006: 292). At the same time, a few of the ‘absolute’ locatives in PIE are denominative in origin – cf. \**h<sub>2</sub>(e)nt-bhi-* ‘around, on both sides’ (> Latin *ambi-*), which is a derivative (same source, p. 292) of \**h<sub>2</sub>ent-* ‘face’.)

In the case of Ju|’hoan, the verbs most commonly enlisted for the expression of locative implications include the usualitives and venitives, as well as other generic verbs of direction, direction change, and general movement. Dickens offers a list (2005: 70, 82-83) of directional verbs commonly encountered in serial constructions of this kind, while being capable, nonetheless, of use as main verbs in their own right. These are tabulated below.

**Fig.IV.15.** Directional verbs commonly used in Ju'hoan serial-verb constructions, after Dickens (2005: 70, 82-83).

ú	'go'
tsi	'come'
g!áá	'go home'
ce	'return'
g àèà	'arrive'
n  humi	'go around, surround'
n  huri	'go underneath'
n!áú	'go over'
'àbà	'step over'
xàri	'go through'
àm	'go right through'
tò'má	'be near to, be close to'
‡áán	'be far from'
g áíá	'go out' (g!à'i-á with plural subject)
g!à'ámá	'go in, enter'
'ú	'put in, insert'
khàrúá	'get off, get down from'
g  xún	'put down' (g  à with plural object)
‡aeha	'go down'
!'ààn	'go up'

The use of such directional verbs is illustrated in the following examples from Dickens:

(18) Mí !òmà tè |óá sé ||'àbà !aihn

Mí !òmà tè |óá sé ||'àbà !aihn.

PRO1<sup>st</sup> sg be.short CONN NEG see step.over tree

'I am short and cannot see over the tree.'

[Dickens 2005: 81]

(20) Da'àmà khù gláá kàtongá

Da'àmà khù gláá kàtongá

Child jump go.out box

'The child jumped out of the box.'

[Dickens 2005: 81]

As will be seen next, directional verbs of much the same kind also play a prominent role in !UI-TAA languages, while very similar directional verbs make up the majority of the verbs found in the 'double verb' constructions of the Khoekhoe languages.

### TAA.

The following brief outline is based on the very small amount of information that can be gleaned from the short accounts in Traill (1985) and (1994), as well as from the example sentences provided in the body of Traill's dictionary.

#### *Basic morphemes of tense and aspect.*

The !Xóǀ dialects described by Traill appear to have in common with the languages of the JU and !UI groups a small set of grammatical morphemes used to express various basic distinctions of tense and aspect. These include:

**Fig.IV.16.** Basic morphemes of tense and aspect in !Xóǀ.

ń	Present (Incomplete aspect?)
bà	Present (Incomplete aspect?)
à	Past
sâa	Future (< sâa 'go')
kâ, qâa	Potential (> Conditional, Medio-passive)

The basic ‘postural’ verbs may be used (conventionally enough) with existential copular implications, as noted by Traill (1994: 34). The examples in the mini-table below are extracted from material scattered throughout his dictionary.

**Fig.IV.17.** Copular uses of basic postural verbs in !Xóǎ.

gloss	implication	!Xóǎ	example
sit	LOC COP	tshûu [sg], !’áã [p/]	⊙qhòǎ tshûu ‘be in the fork of a tree’
stand	LOC COP	llhûũ [sg], ‘llnyhã [p/]	‡òhlo llhûũ ‘be on hands and knees’

*Multi-verb constructions.*

The basic morphemes are supplemented by the grammatical enlistment of a fairly predictable set of verbs, which are used to add a wide range of further distinctions, not only of tense and aspect, but also of modality. The verbs in these multi-verb constructions are also used in the regular way for purposes of complementation, as well as adverbial modification (particularly of a directional kind). The basic ventive/itive *sáa* appears to have a number of inflectional variants, such as *sîi* ‘come, arrive’ and *sîi* ‘come to’. (These may be used in turn to express additional grammatical implications.)

The following mini-table gives an idea of the range not only of the verbs enlisted in the multi-verb constructions of !Xóǎ, but also of the grammatical purposes for which they are used. (As will be seen, the substantive meanings of the grammatically enlisted verbs may not always be apparent.)

**Fig.IV.18.** Verbs used in multi-verb constructions in !Xóǝ, sourced from material scattered throughout Traill (1994).

meaning, where known	aux. implication	!Xóǝ	example
	<b>ASPECT</b>		
	be busy doing V	tūa	ǀái n̄ tūa !nāã 'the lion is busy moving about'
spend the day, sit, dwell	incomplete action	ǀgāã	n̄ n̄ ǀgāã tshōa ǀōh'na ǀqhúú 'I am spending the day [still] waiting for the whiteman'
start, begin, emerge	incomplete, 'ingressive' action	tshōa	n̄ n̄ ǀgāã tshōa ǀōh'na ǀqhúú 'I am spending the day [still] waiting for the whiteman'
	be on the point of V	tV'V	ùh n̄ tú'ù sâa 'they intend going' n̄ tã'n̄ sâa 'I am on the point of going'
	<b>MODALITY</b>		
	ought V	!nāã BV	āh n̄ !nāã bā sâa tē 'you ought to go'
	ought V	!uBV	n̄ n̄ !ūm sâa tē 'I ought to go'
	negative copula, not be (at)	ǀ'âa [neg. of ǀi]	n̄ n̄ ǀ'âa ká ǀāũ ǀnāa 'I have no tobacco'
	negative V	ǀqhúa	n̄ à ǀqhúa ǀnēe 'ǀnàje sî ǀllqhóba ké 'I did not see the tree and tripped over it'
	<b>ADVERBIAL</b>		
come from, leave	V through	ǀnāla	ǀ'ali ǀǀnāla 'pierce through', ǀllqhòbu ǀǀnāla 'burst through'
ascend, arise	V up	kx'âba [sg], ǀlxóbe [pl]	ǀ'ahle kx'âba 'rise up'
	V protractedly	ǀôlo	èh à tshúu tē ǀôlo 'she sat for ages'
	first V	kx'âm	n̄ n̄ bà kx'âm 'ēe ǀàje ǀ'án kx'âhe tîi 'I am first eating meat, later drinking tea'
	V afterwards	ǀ'án	n̄ n̄ bà kx'âm 'ēe ǀàje ǀ'án kx'âhe tîi 'I am first eating meat, later drinking tea'
	quickly V	tsōhũ	èh n̄ bà tsōhu sâa 'he quickly goes'
	suddenly V	ǀkx'òa	ǀkx'òa ǀǀnāla 'suddenly come out'
	again V	ǀqhâo	ǀā n̄ bà ǀqhâo káne kán 'do you want more?' (again want)
	merely V	ǀ'âa	tâa tē'ē n̄ ǀ'âa bà !nūm ǀūa ǀqhîi 'this man just lives and passes walking about' (i.e. is itinerant)

A number of these verbs (such as *tūā*, *tshōā* and *tsōhū*) bear a clear resemblance to equivalent auxiliaries found in Bantu languages.<sup>5</sup>

Many more auxiliary verbs are used in !Xóǝ, much as in Ju|'hoan and |Xam, to add quasi-adverbial implications of direction to a basic verb of movement. Some of these are shown in the composite table at the end of this chapter.

Lastly, !Xóǝ appears to use a generalized 'transferrance' morpheme, |nàV, which probably has its origin in a verb meaning 'give', and which functions as a benefactive or directional particle, as in the following example:

(19)       |ǎi n̄ bà llqháa |nàã ʔOnàã  
              |ǎi    n̄    bà    llqháa-|nàã ʔOnàã  
              Lion TA    TA    urinate-EXT tree.pl

'a lion urinates onto trees'

[Traill 1994: 67]

The similarity of this morpheme to the benefactive of Ju|'hoan will be apparent.

## !UI.

The following sketch offers a tentative outline structure for a typical positive sentence in a !UI language, here represented by |Xam.

**Fig.IV.19.** Basic sentence structure for |Xam.

NP ([VMod (+)]) (VNeg (+)) [VTns/Asp] ([V(V))Adv (+)] [V(-V)](-V)  
 (NP) (Adjunct)

*Basic morphemes of tense and aspect.*

A simple present tense does not appear to be overtly expressed in the |Xam texts (although this could be merely an indication that a narrative tense of some kind was favoured by the consultants in the particular context of their interviews). A future or (irrealis) is expressed by means of the ventive *sa:*, with allomorphs in *se* and *si* that may reflect subjunctive or other inflections. (This feature contributes to the impression of a multi-verb (rather than serial-verb) constructional type.) A simple past is expressed by *hǎ*.

**Fig.IV.20.** Basic morphemes of tense and aspect in |Xam.

ne	Incomplete aspect? )
ku	Present (Incomplete aspect?)
hǎ	Past
saa	Future (venitive)
ká	Potential (> Conditional, Medio-passive)

The particle |*ne* frequently found before the main V complex (and very occasionally before a modal auxiliary) was described by Dorothea Bleek as:

‘Probably a form of |*na*, ‘to let’. Used in imperative, or to denote a state, habitual action, or merely a continuation of the narrative, in which case it is often joined to the verb particle |*ku*.’

These two particles can probably be parsed as progressive (or ‘imperfective’) morphemes, although they will here most often simply be labelled ‘TA’ (to indicate an implication of tense or aspect).

In addition to the basic morphemes, the |Xam texts reflect a great variety of auxiliary verbs, which are used to express a considerable range of modal and aspectual implications. These auxiliary forms may require subject concords (in the form of pronominal recapitulations), and may also be accompanied by various linking morphemes (such as *ko* or *ki*) when used in

sequence with other verbs. (It is possible that some of these complex constructions reflect multi-verb patterns (i.e. rather than serial verb constructions). The sources of these auxiliaries include verbs that cover such predictable semantic areas as desire, and fitting or requisite behaviour. The sentences below illustrate some of the |Xam auxiliaries in use.

(21) o máma-ggú-ken kǎŋ |˘kēyǎ ssī ā, tī ē,

!kǎ!kauru ll̥nau, ssī ll̥˘koenyǎ hǎ,

⊙puai ā, ssī |xǎ hǎ,

hǎŋ ll̥xam̄ ttai<sup>q</sup> kui /˘wǎŋ !kǎ!kauru.

o	mama-gu-ken	ka-ŋ	˘kē-a	si	ā	ti ee
CONN	mother-Assoc.PI-?	MOD-?	tell- <i>a</i>	PRO1 <sup>st</sup> PlExcl	BEN?	COMP

‘Because Mother and them would tell us that’

!ka!kauru	ll̥nau	si	ll̥˘koen-a	ha
moon	thus	PRO1 <sup>st</sup> PlExcl	look.at- <i>a</i>	PRO3 <sup>rd</sup> Isg

‘(if) we looked at the Moon in that way’ [i.e. after having shot game]

⊙puai	ā	si	xǎ	ha
game	RelPRO3 <sup>rd</sup> Isg	PRO1 <sup>st</sup> PlExcl	shoot	ResumPRO3 <sup>rd</sup> Isg

‘then the game that we had shot’,

ha-ng	ll̥xam	tai <sup>q</sup>	kui	/˘wǎŋ	!ka!kauru
PRO3 <sup>rd</sup> Isg-?	do.again	walk	do.like	should	moon

‘would continue to go along like the Moon’ [i.e. would not die]



‘While our mothers used to tell us about it, that  
 ‘the Moon, if we had looked at him,  
 ‘the game which we had shot,  
 ‘would also go along like the Moon.’ [Specimens: 66-67]

- Notes to (21).** i. Of the two genders of |Xam, the one expressed by the singular-plural pair *ha/hi* - typically associated with nouns of animate reference - is here arbitrarily labelled Gender ‘I’, while the gender defined by the pronominal pair *hi/hi* will be labelled ‘II’.
- ii. The last line shows the difficulty of translating *kwanη*, which Dorothea Bleek commented was one of a set of auxiliaries ‘generally used in one of a series of clauses to express sequence or effect’, adding that ‘they may be translated ‘shall’, ‘should’ or ‘must’, or by an adverb ‘then’, ‘henceforth’, etc.’. (It is faintly reminiscent of the Sotho *-tšōanèla* ‘do of necessity’.)

*Modals.*

The chart [overleaf] lists predicates associated mainly with the expression of modality, tense and aspect, and draws from Dorothea Bleek’s ‘Grammar’ (1929-30: Pt 2), but also from the later ‘Survey’ (1939). The verbs with seemingly optional variants terminating in *-η* may be examples of the instances alluded to by Bleek, when she noted that ‘occasionally also the verb takes an ending, generally when it can be translated as a participle’.

**Fig.IV.21.** Modal auxiliaries in |Xam as identified by Dorothea Bleek (1929-30; 1939).

<i>Auxiliary</i>	<i>Implication</i>
kó	The modal implication is 'must' or 'should'; and Bleek notes that <i>kó</i> 'is usually followed by another verbal particle'.
k"ɔa	Bleek notes that this morpheme gives the grammatical implication 'should, seems to', and adds that it 'may also be translated 'must'.' (Cf. <i>koba</i> 'must, ought' in SV.)
dɔa	Bleek notes that <i>dɔa</i> implies 'must, can', or a past tense', adding that 'it is generally used with other particles.' (It is possible that it is merely a variant of <i>k"ɔa</i> , above.) Bleek remarks in the 'Survey' that items like <i>dɔa</i> and <i>k"ɔa</i> , as well as <i>kwan</i> and <i>llkuan</i> (below) 'have quite lost their independent meaning'.
kwa:, kwa; kwan	These 'are generally used in one of a series of clauses to express sequence or effect. They may be translated 'shall', 'should' or 'must', or by an adverb 'then', 'henceforth', etc.'
llkuan	Bleek notes that <i>llkuan</i> 'seems to emphasize the following verb; it is sometimes merely narrative, sometimes adverbial in meaning.'
ka	Meaning 'to wish', 'to mean' or 'to intend', <i>ka</i> 'is also used to express habitual action or a state'.
kan	This apparent variant of <i>ka</i> is rather similarly used to express 'continuous action or a state'.
ta, tã, tan	Meaning 'to feel', <i>ta</i> (and its allomorphs) is said to be 'used in the same sense as <i>ka</i> ', and may in fact be a variant of the latter. (This verb of perception frequently appears in combination with a following particle <i>-ti</i> , which is probably an assimilated form of <i>-ki</i> .)
se	Bleek notes that <i>se</i> 'indicates the future or subjunctive', and 'may be derived from <i>sa</i> , <i>si</i> 'to come'.
s'arj	'Appears to be one form of the verb <i>si</i> , <i>sa</i> 'to come'. [...] Sometimes expresses future of conditional action. It is often used with other particles.'
sinj	'Indicates the past tense, also the perfect, pluperfect and subjunctive perfect. It may be derived from one form of the verb 'to sit'.'
oã	Meaning 'to get up, 'go out, 'go away', this verb 'is often used as an auxiliary to designate completed action' ('Survey').
kui	Meaning 'to speak, say' or 'to make, to do' can sometimes be enlisted to impart a causative implication. (In #khomani, the equivalent verb, which may similarly be used to impart a causative implication, is <i>kxʔu</i> 'to do'.)
dī	Meaning 'to make', but also 'become', this verb is occasionally seen to add a quasi-causative implication, following a subjunctive.

*Negative expressions.*

A propositional negative in |Xam is frequently expressed by the auxiliary *k'au* (*ki*) (sometimes represented with a preceding 'ayin', as /*auki*). Its use is seen in the following example, which also shows the presence of a morpheme, *ki*, between the negative auxiliary and the main verb:

(22) Ssit̩t̩n /*auki* sse ll<sup>h</sup>koen !ka!kauru

Ssi-t̩t̩n	/ <i>au</i> -ki	sse	ll <sup>h</sup> koen	!ka!kauru
PRO1 <sup>st</sup> plExcl	NEG-?	IRR	look.at	moon

'We may not look at the Moon.'

[*Specimens*: 66-67]

A somewhat similar verb, *nll̩au*, is used as a negative imperative in Jul<sup>h</sup>hoan, as noted earlier.

Another negative auxiliary occasionally seen in |Xam is *tã* – which expresses inability (much like the *-tama* verbal extension of Jul<sup>h</sup>hoan). In other !Ui varieties, the negative auxiliary /*au* (*ki*) seems to be replaced by an element that resembles a negative auxiliary generally found only in *subordinate* clauses in |Xam, namely |*n̩d̩*. For example, Dorothea Bleek recorded a negative particle in !ID !ke (ed. Güldemann 2000) that showed various realizations of |*nV* (|*no*, |*na*, |*ne*, |*ni*); while Maingard (1937) described the regular negative particle in #Khomani as ll<sup>h</sup>*ko*.

*Adverbial implications.*

It is likely that the 'adverbial' elements used in the slot *preceding* the verb, often to express additional implications of tense and aspect, are themselves verbal in origin. (They are

notable for their regular use in conjunction with linking morphology.) The table below shows some of the most commonly encountered of such adverbs in |Xam.

**Fig.IV.22.** Pre-verbal adverbs of |Xam.

implication	Xam
do first, already	!hām̩m V
do first	mai
do afterwards, next	!hou, !hau
do really	!khai
do altogether	!kóā-k̩en V
do again	!xā:
do repeatedly	!kana
do also	!xām̩(-ki) <i>Ths</i> V
do formerly, long ago	oa V
do again, still, yet	!kā̃na, !karra
do later	!hām
do still, yet, continue to do	(TA) !naũ(-ko/ kau) V
do always, often	!kwait̩n, !kweit̩n
do then, thus, as follows	!nau
do thus	!kwē̃i
do quickly	ǎ̃rō-kō V, !kārro-k̩en-!kārro-k̩en V, ss'ǎ̃ũ V ('fleetly, quickly')
painfully	dúrru
softly	kā̃mm V
silently, quietly	ǎ̃gou

The grammatical implications suggested in the left-hand column are of the familiar kind imparted by elements within the complex multi-verb conjugation of the Bantu languages, even though any 'substantive' meanings the |Xam verbs might once have had are now mostly opaque.

*The main verb.*

The main verb in |Xam may itself be a 'double verb' (i.e. complex predicate) where the second component is frequently (but not always) a verb of direction or motion. An

example may be seen in the extract below, where *ts'ú* ‘blow’ combines with *hhó* ‘lift, pick up, take off’.

- (23)        *llgóllgo-Ōuakən |ne ss'ā hī-hī*  
               *haŋ |ne ts'ú-hhó tōi-|kú [...]*  
               *haŋ |ne ts'ú-ki llkāitən |kúkən-Ōuá*  
               *au !gwāxu.*

<i>llgóllgo-Ōuakən</i>	<i> ne</i>	<i>ss'ā</i>	<i>hī-hī</i>	
Whirlwind-DIM-?	TA	come	PRO3 <sup>rd</sup> Ipl.redupl	
<i>Ha-ŋ</i>	<i> ne</i>	<i>ts'ú-hhó</i>	<i>tōi- kú</i>	
PRO3 <sup>rd</sup> Isg-?	TA	blow-take.up	ostrich-feather(s)	
<i>Ha-ŋ</i>	<i> ne</i>	<i>ts'ú-ki</i>	<i>llkāi-tən</i>	<i> kú-kən-Ōuá</i>
PROIsg-?	TA	blow-?	go.up-?	feather-?-DIM
<i>au</i>	<i>!gwā-xu</i>			
AU	sky			

‘A little whirlwind comes to them;  
 ‘it blows up the Ostrich feathers [...]  
 ‘it blows up the little feather  
 ‘into the sky.’

[*Specimens: 136-137*]

**Note to (23).** The morpheme *au* in [Xam is very broadly similar to *kò* in Ju]’hoan, and functions as a kind of adverbial complementizer (i.e. to introduce a peripheral argument).

The example also illustrates a case, however, where two verbs in sequence are separated by intervening morphology: cf. *ts'ú-ki* 'blow' and *llkãî-tɛn* 'go up, ascend'. Dorothea Bleek analysed the function of particles such as *ki* simply as 'joining verbs'.

*Directional verbs.*

The extract above includes an example of a directional verb, *llkãîtɛn* (possibly participial, from *llkãî* 'ascend'). The following table shows further examples of such verbs, which may appear as main verbs, but which seem to occur equally often as the second component of V-V compounds. In addition, they may be used in the *preverbal* adverbial slot to provide a *locative* implication. The examples are partly from Dorothea Bleek's 'Grammar' (1929-30), but a few extra items are sourced from Bleek and Lloyd's *Specimens*, and Dorothea Bleek's *Dictionary*.

**Fig.IV.23.** Directional verbs commonly found in compound constructions in |Xam.

<i>Verb</i>	<i>Adverbial implication</i>	<i>Locative meaning</i>
llhij	'come out'	'out'
lle:	'enter'	'in'
u	'leave, go away, arise'	'away, out, forth'
!ũ	'go forth, out, away'	
!k?ũ	'move away, forward'	'forward' (adv)
!nabba	'go along'	'along'
oã	'leave, come from'	'away'
!kõa:	'go away from, fall'	
llkai	'ascend'	'up'
ho	'lift up'	'up'
!hoa	'put, lay'	'up'
!kũi	'rise'	'up'
!kou:	'fall, pass'	'down, past'
!kũ:i	'fall down, away'	'down, back, away'
llkoe	'descend'	'down'
!Ahí	'go ahead, pass'	'in, on, over, off'
!Ahá:	'go across, past, head'	'in front'
!kuj	'follow'	'behind, below, under'
llnùj	'pass, go behind'	'behind'
!k?a:	'poise, be poised'	'up, above, at side of'
!kei	'come to, arrive at'	'at, to, towards, on'
!khe:	'stand, remain, stop'	'on'

*Introduction of additional arguments.*

There are traces of an applicative (or benefactive) particle *ã* in !Xam, which seems to derive from a verb meaning ‘give’. It is not always used as a verbal extension, however, but may follow the beneficiary noun. The use of this morpheme as an apparent post-*nominal* particle can be seen in the example below:

(24) ha |ne ddà |gáppɛm-ttu ã !nɿiŋ

ha |ne ddà |gáppɛm-ttu ã !nɿiŋ

PRO3<sup>rd</sup>Isg TA make |Gappem-tu BEN? kaross

‘He made a kaross for |Gáppɛm-ttu.’

[Specimens: 374-375]

It seems plausible that this deverbative element may be cognate with the equivalent benefactive morpheme seen in !Xóǝ, namely -|nǝǝ, as well as the one noted in Ju |’hoan, namely -|’ǎn (Dickens) (or -|’ǎ, Snyman).

Although there appear to be no other extensions in !Xam, Maingard (1937) recorded the use in #Khomani of an accompanitive or instrumental particle |ŋǎ, which seems to have meant ‘do/be together with’, and was perhaps essentially a nominal co-ordinator. The examples below are from Maingard:

(25) Na |’ue |ŋǎ |khou

Na |’ue |ŋǎ |khou

PRO1<sup>st</sup>sg shoot INSTR? bow

‘I shoot with a bow.’

[Maingard 1937]

### V.5. Aspects of the verb phrase and the compound verb in representative KHOE languages - KHOEKHOE and KALAHARI branches.

The following notes provide some brief background information concerning the structure of the verb phrase and the internal structure of the verb itself in the Khoekhoe and Kalahari branches of KHOE.

#### KHOEKHOE.

The structure of the (active) Khoekhoe sentence - as represented by Nama - was set out by Hagman (1977: 61-62), roughly as follows

**Fig. IV.24.** The basic structure of the sentence in Namibian Khoekhoe.

NP (ke)X (Adv) (NP) (NP (+ App.)) [Aux] [V+] ([Aux])

The option of an NP followed by an appositional post-particle (App) allows for the syntactic expression of various peripheral arguments (e.g. of a locative or instrumental nature). (The postnominal appositions of the KHOE languages seem to be largely of the denominative kind, though a few may be deverbative.)

Within this over-all structure, the configuration of an *active* verb phrase in Nama may be expanded as below, after Hagman (1977: 61-62), where the figure shows the discontinuous distribution of the auxiliary elements:



**Fig.IV.25.** The structure of the VP.

[Aux]	[V (+)]	([Aux])
[Tense (Impf.)]	[V <b>ROOT</b> (+ Der.) (+ Ext.)] (+ Obj. suff.)	(+ Neg.) ([Perf. (+ Cop. i)])

Negation in the case of the Khoekhoe languages is generally by means of the post-verbal morpheme *tama* (< PK \*tama), but may also be expressed in the case of Nama by *tite* (< PK \*tite), typically where the proposition involves a future (or perhaps ‘Irrealis’) condition. (The resemblance of *tama* to negative auxiliaries used in some of the ‘non-KHOE’ languages is simply noted.)

The first auxiliary slot in a typical Khoekhoe variety such as Nama is filled by a morpheme expressive of tense, and optionally also of a progressive (or incomplete) aspect. The second auxiliary slot is used to express a perfect (i.e. completed) aspect, and is often used to indicate the present outcome of a stative verb (i.e. a verb of process).

The tenses of Namibian Khoekhoe include a default ‘present’, which is indicated by the absence of a specific morpheme. The remote past is indicated by *ge*, and a recent past by *go*. In addition to these, the auxiliary may contain what is termed by Haacke and Eiseb (2002: 99) a ‘future/compellative tense particle’ *nî*, and a ‘potential (semelfactive) tense marker’ *ka* (also spelled *ga*), which is often associated with the verb of the dependent clause (or protasis) of conditional propositions. (These last two particles might alternatively be construed as modal.)

As far as aspect is concerned, a progressive (‘imperfective’) implication is expressed by a morpheme *ta* (~*ra* after a vowel), which attaches to any of the tense particles in the first auxiliary slot, namely *ge go* or *ga*, but which appears as an independent particle in the case of the unmarked present, as well as the future expressed by *nî*. (The vowel of this particle may harmonize with that of the tense morpheme, e.g. so as to give *gere* or *goro*.) (In !Ora, the equivalent morpheme appears as *na*.)

The completed (or ‘perfective’) aspect is denoted in Khoekhoegowab by the particle *hâ*, which is used after the verb in the second auxiliary slot. The likelihood of a link between this particle and the verb *hâ* meaning ‘stay, remain’ (and ‘be at, exist’ in its stative form)

was suggested by Hagman (1977: 94). When used in association with the two past tenses, this morpheme is followed by the particle *i*, described by Hagman as ‘the past allomorph of the copula’, but identified by Haacke and Eiseb (2002: 55) as a ‘past/future/negative stative particle’.

For ease of comparative reference, the basic morphemes described above are placed alongside those of Ju|’hoan described earlier:

**Fig.IV.26.** Basic morphemes of tense and aspect in Khoekhoe, alongside those of Ju|’hoan.

<b>JU</b>		<b>KHOEKHOE</b>	
∅	Present	∅	Present
		ge	Remote Past
kòh	Past	go	Recent Past
kà (~ gà)	Future	ka ~ ga	Potential (semelfactive)
ní kò	Quasi-modal auxiliary: Anterior Future Perfect (‘would’).	nî	Future compellative
kú	Progressive (or ‘imperfective’)		

### **KALAHARI**

In the case of some of the Kalahari KHOE languages - such as represented particularly by the Khwe (or Kxoe) dialect group within the *KXOE* branch - the picture is complicated slightly by the interpolation, in the active sentence, of syndetic morphology between the verb and its particles of tense and aspect (TA), as well as between the verb and certain of its derivational suffixes (i.e. extensions).

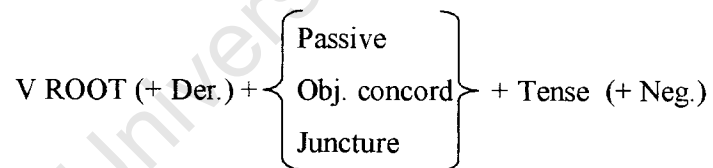
The two linking morphemes of the Khwe dialects have traditionally been termed ‘junctures’. The nature of these junctures is summarized by Kilian-Hatz, in the context of explaining (2006) their occurrence in what are proposed to be serial verb constructions, as follows:

‘Complementary to the suffix *-i* marking the passive voice, there are two morphemes in Khwe - each with a large set of allomorphs - that relate TA suffixes to the verb and may be interpreted as two markers for the active voice. The one is glossed as ‘I’ and relates the present and future suffixes to the verb [...]; the other is glossed as ‘II’ and relates some derivational suffixes and the past suffixes to the verb stem. [...] The morpheme ‘II’ is also suffixed obligatorily to each verb in an SVC except to the last one.’ [...] the morpheme ‘II’ in Khwe functions as a pure construction marker in SVCs and does not have any coordinating or subordinating function anywhere else in the grammar. In an SVC, it is neither an active voice marker nor indicating a past tense of the complex verbal action.’

(The question essentially addressed by Kilian-Hatz in the quotation above is whether the linking morphology constituted by these ‘junctures’ can be interpreted as having any of the functions of co-ordination or sub-ordination – since this would invalidate the analysis of the verb sequences as true serial verb constructions.)

Vossen (1997: 190) sketches the structure of the verb phrase in languages of the *KXOE* group (western Kalahari) as follows:

**Fig.IV.27.** Basic structure of the verb phrase in Khwe languages, after Vossen (1997: 190).



**Notes to Fig.IV.27:**

- i. A passive in the Kalahari KHOE languages may in general be expressed by a suffix such as *-ye, -i, -e* or *-ε* (< PK \*-he). A second type of passive construction is found in the Kxoe dialects (of the KXOE group), where the reflexive verbal suffix *-can (~-cen)* (< PK \*-sani) may be used with a passive implication (cf. Kilian-Hatz 2003: 24), and the agent is introduced as an oblique argument by means of the instrumental particle *kà*.
- ii. Negation in Kxoe may be expressed by a post-verbal morpheme *-vé: ~béé*.

**Fig.IV.28.** Morphemes of tense and aspect reconstructed for Proto-KHOE, after Vossen (1997: 360-365).

PK	KHOEKHOE	KHOEKHOE	KALAHARI	KALAHARI
	'Namibian'	'Cape'	'Western' Kalahari	'Eastern' Kalahari
	[Nama, Dama +]	[Ora]	<i>KXOE, NARO,   ANA</i>	<i>SHUA, TSHWA</i>
*ko	rec.past	pret.	(Kxoe; Naro: -kò, pres.)	Shua; Tshwa: pres.
*hã	completed ('perfect')	'durative'	Kxoe: pret.; Naro: imperf.;   Ana: imperf.	Shua: pret., imperf., rem. past; Tshwa: pret., imperf.
*ke	rem.past	perf.	Ana: pres., rec. past	Shua: pres.
(*ta)	progr.	fut.	Kxoe: rec. past	Shua: pret., rec. past
(*ka)	'indefinite', pot.	?	Naro,   Ana: future	
*nĩ	fut. 'compellative'	fut. 'compellative'		
*hĩ			Kxoe: rem. Past	Tshwa: pret.
(*tu)			Ana: rec. past	Shua: perf.
*kua			Naro: conditional, int.;   Ana: 'durative'	Shua: pres., fut.; Tshwa: pres.

*Notes on the verb.*

### **KHOEKHOE.**

The core of the verb in Khoekhoe languages (i.e. Nama and the other dialects of Namibian Khoekhoe, as well as !Ora) may be an entity compounded of two or more lexical predicates. This compound (V-V) form may in turn take a range of extensions. These were divided by Hagman (1977: 73-82) into:

- i. various derivational suffixes, largely representing apparent grammaticalizations of former secondary verbs, and effectively adding a 'semantic extension' – and
- ii. various inflectional suffixes, which attach as an 'outer layer' to the derived stem of the verb (or 'double-verb'), and which serve to express various syntactic relations between the predicate and its associated arguments.

Finally, Namibian Khoekhoe has a small group of auxiliary verbs, which are placed after the main verb. Three of these, namely *llkhā* ‘be able’, *lloa* ‘not be able’, and *kai* ‘permit, compel’, are found only as auxiliaries; while another three also occur independently, namely *‡ao* ‘want, desire’, *tsá* ‘feel, perceive, seem’ and *toa* ‘come to an end, finish’.

The resemblance of the negative verb *lloa* to negative morphemes identified in the JU and !UI-TAA languages will be noted.

## **KALAHARI.**

To varying degrees, the Kalahari languages may similarly make use of occasional V-V cores (i.e. ‘double verbs’). The verb stem may similarly carry various derivational and inflectional extensions; and a few auxiliary verbs may also be used.

Some of the Kalahari languages even have a slightly more extensive repertoire of possible extensions (or at least derivational suffixes) than Khoekhoe languages. In addition, insofar as these suffixes do not express grammatical implications, but merely alter meanings, with potentially fuzzy outcomes, they are probably best described as derivational. (Although the addition of derivational morphology has the potential to alter word-class in many languages, this is of course not a necessary aspect of its function.)

Overall verbal morphology reconstructed for Proto-KHOE by Vossen (1997: 341-381) includes the following verbal suffixes, which are largely of the inflectional type:

**Fig.IV.29.** Verbal suffixes reconstructed for Proto-KHOE, after Vossen (1997: 341-381).

passive	*-he
dative	*-ma
reflexive	*-sani
reciprocal	*-ku
sociative-comitative	*- xɔa
causatives	*-si and *-ka (Kalahari KHOE only)
directive-locative	*-!ʔo (Kalahari KHOE only)
terminative-itive	*-xu (Kalahari KHOE only)
optative	*-kxʔao (Western Kalahari only)

It is a characteristic function of verbal extensions to specify certain properties or roles of the associated arguments, or to permit the introduction of additional arguments.

Crosslinguistically, such extensions are typically deverbative, and it is unsurprising that a number of the KHOE extensions appear to have fairly transparent deverbative sources. For example, concerning the ‘terminative-itive’, \*-xu, Vossen notes (1997: 354) that it has undoubtedly arisen through grammaticalization of a verb meaning ‘leave behind’, which is reconstructed for the whole of Proto-Khoe as \*xu. The dative suffix \*-ma is believed to be similarly deverbal in origin, with its origin most probably in a verb meaning ‘give’ (<PK \*ma). It seems a strong likelihood that all of these morphemes have probably arisen from former constructions involving verbs in sequence.

The resemblance of some of these KHOE extensions (and in particular the sociative-comitative) to equivalent morphology previously seen in the JU and !UI-TAA is reasonably clear. The presence of actual extensions in ‘non-KHOE’ languages is perhaps most visible in Ju’|hoan, and it might therefore be contended that they are simply ‘borrowed’ from KHOE. However, this would be an unlikely development, given that extensions generally emerge out of longstanding prior patterns based on multi-verb constructions.

*The compound predicates or 'V-V cores' ('double verbs') of the Khoe languages.*

One striking characteristic of the 'double-verb' constructions particularly prevalent in the Khoekhoe languages is their use of directional predicates. Although often assumed to come from a potentially unlimited group of verbs, it appears that this class of predicates, while certainly large, may in fact be closed. Where they are enlisted to form part of complex V-V constructions in Khoekhoe languages, they have tended to become fused into fully lexicalized forms, perhaps in reflection of a particular pathway that has been taken by these languages.

It has been seen that very similar directional predicates are used in the JU and !UI-TAA languages. In these languages, however, their most characteristic role, however, is to add implications of the directional-locative adverbial type.

This pattern of divergent development suggests that any relationship between the KHOE and 'non-KHOE languages is not necessarily a 'close' one. At the same time, it rather strongly suggests that the similarity of the directional verbs found across the SAK spectrum is *unlikely* to have come about as the result of mere borrowing, precisely because, under such circumstances, a closer resemblance in their applications might have been expected. (It is also noted that some of the directional verbs in JU and !UI-TAA may well occur, like their counterparts in Khoekhoe, as secondary components of the main verb; while in a few cases, as noted earlier, certain frequently used compounds of this kind appear as lexicalizations similar to those of Khoekhoe.)

The mini-table below illustrates some of the directional verbs commonly found as V2 in the compound verbs of Khoekhoe languages. The examples for Namibian Khoekhoe are sourced from Haacke and Eiseb (2002), where they can be found under the entries for such verbs of motion as !gû 'go, walk, leave'; hã 'come'; !nari 'move, travel'; dã 'step, tread'; llkhana 'fly', ai 'do first' and ao 'toss'. The !Ora items are from Maingard (1962: 31-32), with some supplementation from Meinhof's wordlist (1930: 78-119).

**Fig.IV.30.** Directional predicates commonly enlisted as V2 in verbal compounds of Khoekhoe.

gloss	Namibian Khoekhoe	!Ora	PK
‘emerge from’	‡oa	‡kx’oa	PK *‡x’oa
‘come out’	‡ui		
‘go towards’	llgā		
‘be on the way to’	garu, gau, gauru		
‘go away from, leave’	llnā	(llnau)llna ‘(go) away’	
‘go through’	!ganu		
‘pierce through’	khuru	!xarū, !xaru	
‘pass’	!kharu		
‘go/cross over’	khui		
‘rise, raise, pick up’	khui		PK *khui
‘(step) over’	(dā-)!napu		
‘exceed, surpass’	!nā		
‘ascend, go up’	!apa	!’aba	
‘go above’	(llkhana-)‡am ‘(fly) above’ > ‡am (adj) ‘proud’	‡’ama ‘ascend’, > ‡’ama ‘on’	
‘enter, insert’	‡gā	‡kā	PK *‡ā
‘fall, go down’	llnā	llnā	PKK *ll’a
‘put down’	llgui	‡nūi	
‘stand still’	mā	mā	
‘return, go back’	oa	kx’oa, !hoba	
‘encircle’	‡nami	‡nami ‘round about’	
‘go across, over’	!gāu		
‘go over’	(!gū-)!gau ‘(walk into & knock) X goes over’		
‘turn upside down’	(!gū-) !khupu ‘walk into & knock) X turns upside down’		
‘become inverted’	(ao-)!khuni ‘(toss up) X falls upside down’		
‘invert’	‡upi		



## KALAHARI.

Kilian-Hatz (2006) notes that Kxoe ‘has a variety of multiverbal constructions’, which include ordinary consecutive constructions, ‘converb constructions’, and composite forms identified by her as true serial verb constructions.

As she describes them, the converb constructions involve a ‘type of clause chaining where only one verb is finite, the other verbs take a converb suffix *-kò*’. She adds that this converb suffix is placed in construction with a preceding link morpheme, which may be either one of the two Kxoe ‘junctures’ or the passive suffix *-i*. These constructions accordingly have the shape:

**Fig.IV.31.** Schema of a multi-verb construction in Kxoe.

V-link-*kò* V-

The true serial constructions in Kxoe are monoclausal, forming a single intonation unit and being ‘generally suffixed only once to the last verb ( $V_2$ )’. Tense and aspect are expressed only once for the compound verb as a whole, while negation and passivization similarly are applied to the V-V structure as a unit. Kilian Hatz notes that ‘the verbs share the subject’, but that ‘transitive verbs may share the object or have different objects’. The contiguity of the verbs may be interrupted in cases where each verb takes a different object, in which case it will appear before the verb. In addition, Kilian-Hatz notes that:

‘Except for the last verb, each verb in an SVC takes a suffix that otherwise relates the PAST suffixes and some derivational suffixes to the verb stem.’

The suffix in question will be one or other of the ‘junctures’ alluded to above. Their use is illustrated in the following example, given by Kilian-Hatz, who analyses the construction as a ‘manner’ type of modification by  $V_1$  in a *symmetrical* construction:

(29) Ti ll’ám-á |x’ũ-á-tè córó-hè è

Ti	ll’ám-á  x’ũ-á-tè	córó-hè	è
PRO1 <sup>stsg</sup>	beat-II kill-I-TAPres	monitor-3 <sup>rd</sup> fsg	OBJ
‘I beat the iguana to death.’			

Much the same pattern, though without evidence of any linking morphology, is seen in !Ora, as in the following example (Engelbrecht 1936: 218) from one of the Bitterbos narratives.<sup>6</sup>

(30) tsĩ hã tu:s ta tu: io, †nou-!amhe

tsĩ	hã	tu:s	ta	tu:	i	o	†nou-!am-he
and	Perf(?)	rain-3 <sup>rd</sup> fsg	Fut	rain[v]	pass	then	hit-kill-PASS

‘En as die reën dan gereën het en verby is,  
is slaan-doodmaak-geword.’

‘And when the rain has finally passed,  
it (the snake) is pounded to death.’

[Engelbrecht 1936: 218]

*Implications of direction and orientation.*

Amongst constructions analysed by Kilian-Hatz as asymmetrical, a widely found type involves a V<sub>2</sub> of direction or orientation’. Kilian-Hatz notes two ventives, *yaá* (PK \*ha) ‘come’ and *cii* ‘arrive’ (much as noted earlier in Khoekhoe). In the Kxoe cases, these two verbs are apparently no longer used in conjunction with a juncture, which Kilian-Hatz interprets as indicative of their more advanced stage of grammaticalization.

Another set of directional verbs is made up of the three verbs of posture, *tÉ* (PkaK \*tai)

‘stand’, *n†ũ* (PK \*†u ~ \*†ũ) ‘sit’, and *llóé* (PK \*lloe) ‘lie’. These are described by Kilian-

Hatz as defining ‘the position of the actor’, but it probably makes sense to interpret them as copular. (Verbs from this particular semantic group not uncommonly give rise to locative copular predicates, and similar uses are found in Indo-European. Some of the modern descendants of PIE may reflect a similar range of semantic sub-categorizations reflected in speakers’ choices of a particular postural verb for purposes of existential predication, as in English, where a tree may ‘stand’ at the foot of a hill, but usually does not ‘sit’, while a book may ‘lie’ on a table, but can only be said to ‘stand’ if it is placed vertically on the

surface.) The copular use of verbs with a similar range of ‘postural’ implications has already been noted in JU and !UI-TAA.

Kilian-Hatz identifies a further five of the most productively used directional verbs in the V<sub>2</sub> slot of Kxoe. These are shown below:

**Fig.IV.32.** Some directional verbs in Kxoe, after Kilian-Hatz (2006).

	<i>meaning</i>		<i>implication</i>
‡'ōã	‘go out’	>	‘out’
llgéi	‘disappear’	>	‘away’
llx'áé	‘meet’	>	‘together’ (i.e. consociative)
xùú	‘leave’	>	‘away’
llōã	‘go down’	>	‘down’

*Implications of aspect.*

Kilian-Hatz identifies four aspects that appear to be expressed by means of secondary verbs: a continuous, a ‘proximative’ (i.e. ‘be about to’), an inchoative, and a completive. The verb enlisted for the continuous implication is again *tÉ* (< Pkalk \*tai) ‘stand, stay’, while it is the ventive *yaá* (? < PK \*ha) ‘come’ which is invoked to express imminent inception (of being on the point of, or about to do’. As might be expected, the inchoative is expressed with the aid of verb meaning ‘start’, here *nyám*; while the completive or ‘terminative’ is expressed by means of a verb meaning ‘be at an end, finished’, here *xéri*.

Concerning pathways of change, Kilian-Hatz notes that Kxoe features three verbs that have become grammaticalized as suffixes. She notes, however, that their original status as minor verbs is still betrayed by the fact that they are still used in combination with the ‘juncture’. Two of these are grammaticalized aspectual suffixes:

xùú	‘leave’	>	completive
éi	‘remain’	>	‘permansive’

The third is the familiar valency-extending (applicative or benefactive) morpheme *mãã* which arises from a verb meaning ‘give, distribute to’.

It is clear from the account given by Kilian-Hatz that multiverb constructions are by no means confined in KHOE to languages of the Khoekhoe branch. What is more, given the regular enlistment of the very same verbs throughout KHOE, and their occasional reconstructability as now fully grammaticalized morphemes for the whole of KHOE, they should probably be accepted as original. (In other words, there is no reason to seek an explanation for their presence in the influence of any supposed substrate.)

It should be mentioned, lastly, that in concluding her discussion of serial verb constructions in Kxoe, Kilian-Hatz briefly raises the question of the problematic ‘juncture’ labelled ‘II’ and the possibility that it might in fact be a marker of subordination. (Clearly this would invalidate the analysis of the multiverb constructions as true serial verb constructions.) Kilian-Hatz discounts the possibility, however, and endorses the view of Heine (1986) that this juncture was formerly a ‘copula’ used to join two verbs, noting that such a combinatorial function may still be seen in Naro. (Frequent use has led in some languages (e.g. within !Ani-Khwe) to grammaticalization of certain minor verbs, in their bound form, as markers of tense.) In other words, Kilian-Hatz seems to suggest that where the juncture still appears, it is merely a fossilized particle, having neither any syntactic subordinating function, nor any role in expressing a separate tense or aspect for the minor verb.

The alternative possibility is simply noted here that the junctures may represent the last vestiges of morphology much like that associated with certain of the auxiliary verbs in !Xóǝ and !Xam. It seems a reasonable conjecture that in both the KHOE and ‘non-KHOE’ cases, such morphology may indeed once have played a subordinating role (similar to that of the infinitive prefix in some of the Bantu multi-verb constructions).

#### **V.6. Tabulated presentation of cross-SAK similarities in the morphological substance of verbs commonly enlisted for use in multi-verb constructions.**

The comparative Main Tables for this chapter (Tables [IV]1-6) present cross-SAK data in a consolidated format for the verbs most frequently enlisted in multi-verb constructions, as

discussed in the preceding sections. It will be seen that cross-SAK resemblances manifest themselves in the actual morphological substance of these verbs. Since these particular predicates constitute a major part of the grammatical apparatus of these verb-centred languages, the evidence that very similar forms are shared by KHOE, JU and !UI-TAA languages provides fair grounds for surmising the likely relatedness, firstly of the JU and !UI-TAA groups as a sub-entity, and secondly of these in turn with the KHOE group.

It is in the nature of the predicates typically enlisted in multi-verb constructions that some of them are used in more than one role: verbs of directionality, for example, may be used to convey implications of tense and aspect as well as actual locative meanings. For the sake of economy, an attempt has been made to avoid multiple entries for the same basic predicate, but there are a few cases where repetition is unavoidable.

The tables are sub-divided into the following categories, where the verbs presented cover the core meanings indicated:

*Table [IV]1: Basic itive, ventive and postural types.*

These basic itives, venitives, and postural verbs are often used for implications of Tense and Aspect, as well as existential predication.

Core meanings: GO, COME, SIT, STAND, LIE, BE AT.

*Table [IV]2: Verbs indicating subjective attitude, manner & sequence of actions.*

The predicates or deverbative morphemes illustrated are among those most often used to express micro-distinctions of Tense and Aspect.

Core meanings: WANT, SET OUT, BEGIN, LEAD, FOLLOW, FINISH.

*Table [IV]3: Verbs expressing capacity, obligation.*

The predicates or deverbative morphemes listed are those commonly found to express 'Modal' implications (e.g. hortative, potential, negative).

Core meanings: KNOW, BE ABLE, BE FITTING.

*Table [IV]4: Verbs expressing negative implications.*

Core meanings: NOT BE AT, NOT HAVE, NOT BE ABLE, NOT KNOW.

*Table [IV]5: Verbs of process type.*

These verbs of perceiving, saying, doing or making are perhaps associated with verb subcategorization (e.g. as verbs of perception, process or instigated action): and may give rise to causative constructions, and complementizers.

Core meanings: DO, FEEL, SPEAK, TELL.

*Table [IV]6: Verbs with directional implications.*

These are the directional predicates most frequently appearing in core V-V compounds, or in V-V sequences as pre-verbal modifiers or deverbative locative morphemes.

These verbs express processes with intrinsic directional implications: ASCEND/ GO OVER, DESCEND, ENTER, EMERGE, CIRCLE/TURN/INVERT, ROTATE

## NOTES.

1. I am deeply indebted to Tom Güldemann for allowing me to audit a series of seminars he presented at the University of Cape Town in Spring, 2006. I have not always followed his analyses in my own parsings of |Xam, but have benefited greatly from his insights nevertheless.

2. The expression 'verb-centred' languages is used here to refer to languages of the kind where semantic relations (and typically also other aspects of structural meaning and syntax) are expressed by means of grammatically enlisted verbs. The term 'head marking' of Nichols (e.g. 1992: 46-62) does not seem to be readily applicable, since in many cases where multi-verb constructions are the norm (e.g. in Bantu languages), it is debatable whether the 'main' verb of a given proposition is syntactically a 'head' (i.e. at the level of the 'S' constituent), while the notion of 'marking' is more often associated with the use of affixed or enclitic morphology.

3. Some of the verbs typically found in Nilo-Saharan multi-verb constructions are illustrated in the table below, where the information for Moru-Madi languages is from Tucker (1940: 219-234), and for Lendu from the same source (pp 405-408).

<i>Verb</i>	<i>Meaning</i>	<i>Grammatical implication</i>
ba (Moru-Madi)	‘make, put’	causative
‘ba (Lendu)	‘leave’	causative
kwε, ki, fε	‘put’	causative
o	‘do, put’	causative
‘bu (Lendu)	‘give’	causative
ko	‘take’	? past
‘da, ‘do, do	‘become’	past
dre, adre, (a)re, ra	‘abide, be’	progressive, habitual
liri, nili, ri	‘live’	progressive
tε	‘remain’	progressive
ra (Lendu)	‘go’	habitual
u (Lendu)	‘go’	? present progressive
fo	‘go out’	associated with past negative
ŋga	‘rise’	associated with past
tsa	‘arrive’	imminent future
‘dε	‘let, allow’	exhortative
ε’be	‘leave alone’	permissive, exhortative
ka (Lendu)	‘be able’	can, may, must, shall

4. All Proto-Bantu forms cited are from the 3<sup>rd</sup> Tervuren Series, *Bantu Lexical Reconstructions 3*, as last updated 2005 by the editors, Y. Bastin and T. C. Schadeberg. Needless to say, these PB forms, like all reconstructions, are simply postulates, and there remain ongoing points of debate (cf. Schadeberg 2003). However, the current forms are the cumulative result of a century of scholarship, and they can be accepted as a reliable point of reference. The absence of any firm reconstructions as yet for Post-Bantu interstages means that the reflexes of any given modern Bantu language are usually mapped directly from the PB underliers. This needs to be seen as a form of convenient shorthand, in that it bypasses the complex diachronic processes that will have led to the emergence of various intervening stages.

5. A number of the other !Xóǝ auxiliaries, such as *llgàǝ* ‘spend the day’, *ǝǝlo* ‘do for a long time’ and *llkx’òǝ* ‘do suddenly’, likewise recall familiar Bantu auxiliaries (except that they have acquired clicks). To avoid controversy, this point will not be expanded on here.

6. Concerning the different words seen for ‘kill’ in Khwe and !Ora, it is noteworthy that amongst speakers of various !Ora varieties, Engelbrecht found the Lukas community to use *!xam* where the Kats community used *ll’ǝ-gu*. This last is somewhat ambiguous, suggesting on one hand the presence of the reciprocal verb extension; but on the other raising the possibility that it might have arisen from a former double verb construction. The Kats word might then be a contraction (with loss of formerly linking morphology?) that has arisen in the course of regular use of a collocation such as the Khwe *ll’ám-á |x’ǝ* (‘strike-kill’) (Cf. PKaK *\*llx’am* ‘strike’; *\*|x’ǝ* ‘kill’). It seems also notable that Nama has both *!gam* and *dǝ-xǝ* for ‘kill’.) The example suggests a possible cause of some of the lexical differences sometimes noted between Nama and !Ora. (Ju’hoan words for ‘hit’ are *nǝám*, and *nǝǝq’ú*, although entries in Bleek’s *Dictionary* (1956) suggest that the archival varieties of JU recorded by her and Lucy Lloyd had a word closer to KHOE words for ‘strike, hit’, in *llkam*, *llkamma* (NI) ‘knock, beat, strike’ and *llkamma tsi* (NII) ‘knock’, *llkamǝ* ‘to beat’.)



**MAIN TABLES FOR CHAPTER IV:** Cross-SAK similarities involving multi-and serial verb constructions (or their grammaticalized outcomes).

**Main Table [IV]1.** Cross-SAK comparative series of basic itive, ventive and postural verbs commonly enlisted for grammatical purposes.

		KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI
gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju'hoan	!Xóǀ	Xam
GO (i)		PK *!ū [PK]	!úún [!gû]	!ǀò [Naro]; kūū [Khwe]					!ū 'go forth' !k'ū 'go away, forward', u 'go, leave'
leave behind		*xu [PK, PKK]	xùú	-xu	huu 'leave'	*xu [PKaK; PWK], *xú [PEK]	ú, !húá [vt]		xu: u:i [S1]
GO (ii) (also > COME)			sī 'go, arrive there, come'	sí [Naro]				sī, sí 'arrive, come'	
(i) happen, progress (ii) appear, seem			ī						
BE (look, appear, seem')			ī [stative]					ǀi 'stative, copula'	
arrive, come			khī	cii 'proceed, go to, reach, arrive at' [Khwe]			tsí(-gǀàe) [Sn]		ǀi 'come, approach'
COME		*ha [PK]	hā	hāa [Naro]; hāā (i) 'approach, appear', (ii) 'go on' [Khwe]				sāa (> future)	sa: 'come' (> future)

gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju!'hoan	!Xóǒ	Xam
SIT, stay, remain, BE at (i)	be at, present		hâ [stative]	hâna ~ hâa; [Naro]; gllâa 'sit, rest, lie' [Naro]; hââ (iii) 'lie, be at' [Khwe]					
	completed (perfective)	*hâ [PK]	hâ [hââ] [AUX]	hâa > Past [Naro]; -[juncture]-hâ > rec. past, complete [Khwe]				à [Past]	hǰ [Past]
SIT, BE at (ii)		*ʔu [PK]	ʔnú	ʔnǒó 'sit, be' (> COP) V + ʔnǒó [AUX] [Naro]; nʔû; V -[juncture]- nʔùè > TA [pres prog?] [Khwe]			n áng [sg subj], g!hòó [pl subj] ʔǒ 'w. out- stretched legs' [Sn]	tshûu [sg], !'ââ [pl] (> COP)	s'ó
dwelt, sit, settle, sojourn		*llʔan(i) [PK]	llʔan [llan]	llʔâè [Naro]; llʔán [Khwe]			gllâa [Sn]	llgâã 'pass the time' (> in process)	llan, llêi, llen:, llenna
linger, sojourn, stay a while				kxâe 'linger at [Naro]				[kx'âe (away from home)	
stay a while				ʔʔau 'abide a while' [Naro]					
remain, stay behind, dwell			!àù [!gau] 'stay/leave behind'	!au 'stay, remain, leave behind' [Naro]		*!au [PKaIK]	!nau 'sit down, set, alight, live' [NI]	!âo 'stay behind, leave'	!hau <sup>9</sup> 'visit', !kâu 'sit' [SII]
	> still, yet, continue								!nauñ(-ko/ kau)
STAND, BE at (i)							n!ún [sg subj], gllâ [pl subj]	llhûu [sg], ?llnûhâ [pl] (> COP)	!kuǰ [SII]

gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóǒ	[Xam
STAND (ii)			? (mâ)	téé, tēe-a téé [Naro]; tàn, tàny, tâi [Khwe]			ge		!ga [SII], !khe [SI]
stand, BE at, exist				tēe 'be situated' (> COP) [Naro]; tīi 'stand, be at' [Khwe]			ge		
rise, stand, get up [pa-ida]		*khāi [PKK]	#khai	#xái-ka-xu 'wake up someone' [Naro]			#xai 'wake up' [Sn]	#ēē 'wake up' [vi]	llkai-tən
L.IE				hāā [Khwe]			cú [sg subj], g#à [pl subj] 'lie'	tûu [sg], #q'âu (#q'aV) [pl] (> COP)	taa
go down (i)							n#hao [sg subj], tàqm [pl subj]		
lie		*lloe [PK]	llóé + V [llgoe]	llóé 'lie, rest', > 'be in process of' [Naro]; V-[juncture]-llóé > TA [habitual?] [Khwe]					
go down (ii)		*llǎ [PK]	llǎn + [llgôa]	llǎ [Naro]; #x'óá [Khwe]				kx'úa-sà [sg]	!kǎa 'fall', llkoe (Strontbergen)

**Main Table IV(2).** Cross-SAK comparative series of verbs commonly enlisted to express subjective attitude and sequence of actions.

		KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI
gloss	implication	PK: PKK	Nama, Dama +; !Ora		Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǒ	Xam
WANT, desire	Future, Imminent		‡ao[‡gao] [AUX][stative]	‡áo 'want' [Nar, Xanagas var.]; n#ã [Khwe]			n#'hao [Sn] (in compound)	‡áo kV 'long for', ‡'án-sí 'wish'	‡kaò-wa [Specimens: 22]
SET OUT, go forth, begin; leave, quit		*‡x'oa [PK]	‡oa +	‡x'oa [Nar]; ‡x'óá-(ra-xu) [Khwe]			llkɔa ù [Specimens: 410]		!kōa 'go away from, travel away, fall'; o:a
formerly, long ago							gōã, kãaha [Sn], g#'haã, za'aha	qãa	oa
BEGIN (i)	ingressive		tsoatsoa	tshoa-tshoa [Nar]			tšhōa-tšhōa [Sn]	tshōa-tshōa	
BEGIN (ii)	do first			nyám [Khwe]			kamaha 'firstly'	kx'ám	!hám V
LEAD, go ahead	do first						‡ã	‡haã	
FOLLOW (i)	do next, then	*‡oa [PK]		òò [Nar]; ‡oá [Khwe]			hoo [Sn]	!òo,  òho	
FOLLOW, appear at, approach (ii)	do next, then		llkx'ái [!Ora]	llham-[juncture]-V [Khwe]			llxám 'accompany, follow' [Sn]	llãha sii 'arrive behind'	!hau, !ha:o 'follow, do afterwards' > 'afterwards'
FINISH (i)				tjhaa [Nar]; llx'arà [Nar]; xéri [Khwe]			‡ani [Sn]	xáli	
FINISH (ii)			toa [stative]	tóá [Nar]			oara[Sn] tōa 'finish, be tired' > tōadí 'finally' [Sn]	òho 'finish'	

gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam
die		*!ʔo [PK]	!ʔóǀ [!ǀǀ] [stative]	!ʔó [Khwe]					[kū [stative]
cease, die			!ǎǀ [!gao] 'cease (e.g. of rain)'				!ǎi [sg], !ǎǀ [pl] [Sn] 'die'	!ʔǎǀ 'die'	

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**Main Table [IV]3.** Cross-SAK comparative series of verbs commonly enlisted to express capacity or obligation.

		KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI
gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju!hoan	!Xóǀ	!Xam
think		*#ʔin [PK]	#ʔáin [ʔái]	#ʔé [Nar]; n#ā [Khwe]			#ʔang ‘think, consider’	#ʔán-sí ‘think, guess, wish’	#ī
KNOW		*#ʔam [PK]	#ʔán [ʔan]; #ʔáin [ʔái] [stat.]	#ʔé [Nar]; ā [Khwe]	!ʔāa [Nar];				#erina ‘be conscious’
be ABLE, may	Potential, Conditional		llkhā [stative] [AUX]	ā [Khwe]				qāa, kā	ka ‘wish, say, intend, think’
suffice, have enough		*llxʔā [PK] ‘be sated’	#ʔàun [ʔau] (+ V)				llxʔaa ‘be sated’	? (ʔnāa kV ‘fit, suit’)	
be fitting, suitable	ought	PK *kxʔanu	anu [Nama]; kxʔanu [!Ora]	kxʔano [adv] [Nar]; kxʔanu [Khwe]			lláú [adv]	(#ʔāũ kú ‘be sufficient’)	llkʷaŋ
ought, befit			llhā-sa [!Ora]					!nāã BV + V	
must							ká #ʔàun ká [AUX]		

**Main Table [IV]4.** Cross-SAK comparative series of verbs with negative implications (e.g. of presence, possession or capacity).

		KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI
gloss	implication	PK: PKK	Nama, Dama +; !Ora		Hie- Chware	PKaK; PWK, PEK	Ju!hoan	!Xóò	!Xam
NEG (BE at) (i), (? < GO)			!lnā 'leave alone'				nlla 'leave' (> Neg Imp.)	!l'aa (neg. of <i>lii</i> )	
NEG BE at (ii), be absent			!khai 'be absent' [stative]; !xai-sa 'gone out, absent' [!Ora]	!lǎi 'far away' [Nar]; ? (txaa-can) [Khwe]			? (†áán, !ānm̃)	tái; !lqái ('away, absent')	
NEG be able	NEG		!l'oa [!loa] [AUX] [stative]				-n!l'ho	!lqhúa	
refuse, reject			!howa				!oa [Sn]		
	NEG			!áú 'be too hard for' [Nar]; kx'ǎú 'doubt, dispute' [Khwe]			n!láu (NEG imp.) [Sn], !khau [NI] 'forbid'; !xáú [vt] 'reject' [Di]	g!kx'áo 'reject'	!au(-ki)
leave	NEG IMP		!lnǎá [!lnā] [N]; !l'hǎán [!lhá] [D]	!lǎú; !lxaò (infant at home)			n!lah [vt]; !lxaún 'leave behind'	!áo kV 'leave behind, remain'; !lxaó 'infant at home'; †nǎhn tâ [†nahn tV] 'leave alone'	!ka 'alone' [S1]; !lhi: 'alone' [S1]

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gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalk; PWK, PEK	Ju 'hoan	!Xóǀ	Xam
NEG know, have doubt	NEG		'uu	'úú [Nar]			u + V		nǀ [neg. of doubt, in sub. clauses]
	NEG	*tama [PK]	tama	tama; tàà [Nar]			tàm 'not know'		tã



**Main Table [IV] 5.** Cross-SAK comparative series of verbs expressive of process type.

		KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI
gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju'hoan	!Xóǀ	Xam
DO, make, become	Make DO (causative)		di +				dù ('do, make') + V		di (~da) (+ V),  ki 'get, take, have, possess, make do, cause to do'
	permit, compel		kai [AUX]						
	causative						n#áí + V		
FEEL, sense, experience, hear, try			tsá[tsǎǎ] [AUX][stative]	llám [Nar]; djaára [Khwe]		*llám' [PKalK]	tsá'a [Sn]	tǎǎ ([núm) tǎV 'SMELL-FEEL' [vǐ]	tǎ
seem			tsába				tá'má [vǐ]	naBV	
SPEAK				kx'ui [Nar]; kx'úi [Khwe]			kòkx'ui [Sn]		ku-kūi
TELL, relate		*lla [PK]	llàè, llàrè [llgac, llgare]	llnàe [Nar]; nlláa [Khwe]			nllá 'mean, imply'	llnàte kV	
GIVE	transfer, BENE- FACTIVE		khǎě	kháa (gene-rously)	thee		!ǎn	!qhǎǎ	ka: [S1]

**Main Table [IV]6.** Verbs with intrinsic directional implications.

		KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI
gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju!hoan	!Xóǀ	!Xam
raise, lift up		*khui [PK]	khui	gúi (+V) [Nar]; cúi [Khwe]				gúi (raise, lift [vi], get up [vi])	úí, !kúí 'rise' > 'up'
(step) over, go up, ascend			!ʔáwá [!apa] 'climb onto, mount, ascend'	!ʔábá [Nar]			!ʔábá	!lǀá'bu ká 'step over', kx'ába [sg], !lxóbe [pl]	!khábbu-kǀen
cross over				!lgāǀ, !lgāǀ, kyáo 'pass over, through' [Khwe]			n!áú		
descend, get off				kari-kari-se 'fall down' [Nar]; kheéri-can 'fall down' [Khwe]			kháru		
fall		*!f'a [PKK]	!lnā				n!áng [sg obj], glá [pl obj] 'put down'	!ʔála (!ʔaLV) [sg]; !hái tí [sg], !ʔáli [pl]	
sink (e.g. of stars, sun)								!hái tí [sg], !lnǀa [pl]	
drop, let fall, fall			!lnā-!lnāsen 'drop down'	kyáo [Khwe]		*!áó 'drop' [PKaIK]	n!hào [pl obj] tám [sg obj] [Sn], n!ǀ'á-n!hào 'throw down'		

gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju!hoan	!Xóð	!Xam
low			ʃʔám [ʃam]					!gā'a (kV) 'lower, below'	
put down			llúí [llgui]	? (llòó 'lay down, offload') [Nar]			g!lxún		!kū:i 'fall' > 'down, back, away' [SI]
enter, insert		*ʃā [PK]	ʃàà [ʃgā]	(V +) ʃāà [Nar]; ʃāā [Khwe]			g!á'ámá	ǵlu [sg] (ǵLV), !gā'o [pl]	!e:
come out			(V) + ʃúí [ʃui]				gʃx'úi 'burst through, sprout' [Sn]		
emerge, wake up, rise			ʃkhái	ll'ari-se [Nar]			ʃxái [vi] 'get up'	ʃéé [vi]	
encircle, spin, go round (i)			ʃnami	llnāma-llnāma [Nar]				llgāhma-llgāhma, dzām-dzáli 'spin oneself'	
encircle, twist, go round (ii)			ʃuni 'wring out' [!Ora]	ʃuúni 'turn, twist' [Khwe]; nʃúí 'stir, mix' [Khwe]			nllhumi	dǵmi (sg), llnūm (pl) 'twist, coil', !nūmi 'twist round & round' !q'úm 'twist, wring'	llnūŋ
turn				nlláni 'turn, weave' [Khwe]				!kx'áli kV 'wring' !kx'áni kV 'turn by twisting'	
invert (i)			!khuni,	!x'uri [Nar]; kx'úni-(na-nyévi) [Khwe]			nllhuri		!xwōnni, !xworri

gloss	implication	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam
invert (ii)			!khupu, ʔúwi [ʔupi] 'turn upside down'					llū/lu kV 'overtum', llū/lu (ká ll'úma)	!nwobbo 'stir, swirl stick'
ROTATE, turn over, stir				hòne 'stir' [Nar]		*qón' [PKa IK]		dōni 'twist, wring'	
inside out				kābi 'turn over' [Nar]		*ŋgábi [PEK]		q'ābi 'inside out'	

## Chapter V. Cross-SAK similarities in the sub-systems of specifiers.

### Chapter synopsis.

The first two sections discuss certain typological differences between the KHOE languages and those of the JU and !UI-TAA groups, in respect of the organization of their specifiers within the noun phrase; and the kinds of constructions specifiers are associated with. The last section focuses on a few selected uses of particular specifiers (and other morphemes) in delineating information structure, e.g. through ‘discourse deixis’; or through the characterization of an argument in terms of singleness, uniqueness, or an identity. The section concludes with a set of tables that reveal cross-SAK similarities in morphology throughout the sub-systems of deictic, quantifying and descriptive specifiers. This further evidence of cross-SAK structural affinities strengthens the preliminary case for a likely unity of not only the JU and !UI-TAA languages as a sub-group, but also of the latter collectively with the KHOE languages.

### V.1. Introduction.

The chapter below aims to demonstrate a number of cross-SAK similarities involving the specifier sub-systems. As previously stressed, these similarities are not presented as ‘proof’ in themselves of relatedness. Rather, it is suggested that the overall impression of commonality they suggest – particularly when considered in conjunction with the resemblances involving multi-verb constructions – constitutes fair enough grounds for proceeding to investigate the *possibility* of relatedness. (It should perhaps be emphasized again that actual phonetic correspondences will not be particularly visible at this initial stage, since the data are not chosen for the specific purpose of revealing these.)

The cross-SAK similarities in the specifier sub-systems are visible in the Main Tables at the end of this chapter, which present:

Main Table [V]1. Cross-SAK specifiers of a **deictic** nature, plus terms that may be used to clarify aspects of particularity and identity.

Main Table [V]2. Cross-SAK specifiers of a **quantifying** nature.

Main Table [V]3. Cross-SAK specifiers of a **descriptive** nature.

Amongst the tabulated specifiers of a purely descriptive nature, it will be noted that there is a set of colour terms where the distinctions listed constitute a reasonably exhaustive (and closed) set, and where a potentially cognate exponent is found for almost every term across the SAK spectrum. (It naturally remains open that some of these colour terms may have been borrowed, i.e. that some of the resemblances can be put down to diffusion. This possibility will only be properly testable at a later stage.)

The noun phrase, of course, typically expresses one of the arguments of a proposition; and the principal core argument (or 'subject') of a given verbal predicate will often simply by default form the natural 'topic' of a sentence, with the verb itself dominating the syntactic constituent that supplies the information or 'comment'. One of the functions of specifiers within a noun phrase seems to be to narrow down, by means of deictic, quantifying, descriptive, or other pointers, the range of potential reference of the nominal head, so as to assist in the interpretive mapping of the concept denoted by the nominal expression - to an actually intended, real-world referent. These elements also play a part in clarifying aspects of information structure and may be enlisted, for example, for purposes of 'discourse deixis', or to specify various aspects of the designated referent's involvement in the situation, process or action expressed by the predicate.

The Khoesan languages naturally have grammatical sub-paradigms to fulfil these functions. While it is true that there are certain typological differences between the KHOE languages and those of the JU and !UI-TAA groups, in respect of (1) the *organization* of their specifiers within the noun phrase, and (2) the *kinds of constructions* specifiers are associated with, such typological differences do not necessarily preclude the possibility of relatedness. What is more, when some of the essential similarities in terms of function (or sometimes notional interpretation) are considered, it becomes apparent that specifiers across the SAK spectrum are not merely in principle comparable, but repeatedly display actual formal resemblances.

Some of the surface differences alluded to above are clarified in the discussion below, in the course of which various examples of the specifiers are supplied. The specifier subsets illustrated in the first sections are mainly those of a deictic, quantifying and descriptive nature. A later section focuses more directly on selected functions of particular specifiers, and in the process highlights various core similarities that recur across the SAK languages.

## V.2. Differences in the *ordering of specifiers as constituents of the noun phrase.*

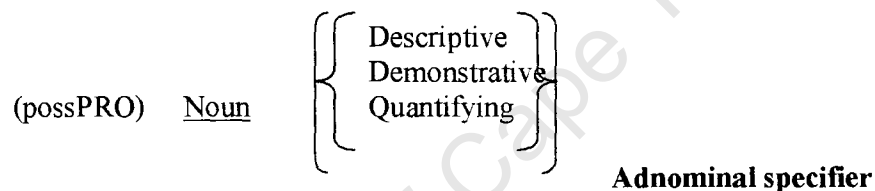
V.2.i. Post-nominal ordering of specifiers in JU and !UI-TAA languages:

V.2.ii. The pre-nominal ordering of specifiers in KHOE languages.

### V.2.i Post-nominal ordering of specifiers in JU and !UI-TAA languages.

The JU and !UI-TAA languages tend to favour a ‘head-initial’ ordering of constituents. A typical noun phrase in Ju |’hoan, for example, might have the following structure (where the adnominal specifiers are subdivisible into demonstratives, quantifiers and descriptives):

**Fig.V.1.** The constituent structure of the NP in Ju|’hoan.



The favoured head-initial pattern of the non-Khoe languages is illustrated below for Ju|’hoan, where the examples are drawn from Snyman (1970: 112-3), but the orthography is updated as far as possible to match that of Dickens (1994). Note that in the case of the demonstratives, *kè* is used in association with nouns of the pronominally defined gender *ka/ka*, and *hè* with nouns of all others (*ha/si*, *ha/hi*, *ha/ha* and *hi/hi*). For clarity, the noun being modified is in each case underlined, while its specifier is in bold. (The morphology associated with the relative constructions will be explained elsewhere.)

### **Descriptive.**

(1)   n!hai-yà **!ái**                      ‘dead lion’      [Snyman gives *n!’hei* ‘lion’]

**Note to sentence (1).** As is the case with several other adjectives in JU (and also !UI-TAA), the word for ‘dead’ is suppletting, as: *!ái* [sg subj], *!àò* [pl subj].

### Demonstrative.

- (2) n!hai-yà ú to'à 'yonder lion'  
(3) !xó-sà hè 'these elephants'  
(4) n|om-à kè 'this medicine'

### Quantifying.

- (5) Jú-sà #háí 'many people'

#### V.2.ii. The pre-nominal ordering of specifiers in KHOE languages.

The KHOE languages, by contrast, tend to favour a 'Specifier Noun' or 'noun-final' ordering. (This 'head-final' preference is predictable enough, given that these languages are verb-final, and also place locative, instrumental and agentive particles after the noun phrase.)

Hagman (1977: 21) provided an outline sketch of the Nama noun phrase and its possible constituents, as shown below:

**Fig.V.2.** The constituent structure of the NP in Khoekhoe, after Hagman (1977: 21).

(PRO) (Universal) (Demonstr.) (Assoc.) (Number) (Modifier) Noun

Hagman added the restriction (p. 21-22) that a member of the pronominal class cannot co-occur in a simple noun phrase with a member of the 'universal' specifier sub-class, or any member of the demonstratives.

Some of the possible exponents for each sub-class are illustrated below, under headings slightly adapted to facilitate comparative discussion. The main departures are made on the basis of a notional interpretation. For example, Hagman's original 'demonstrative' category included some items (e.g. |nĩ 'some, one (indefinite)') which might be interpreted as quantifiers. The same



category also included the interrogative form, *mā?* ‘what?’. Both of these are shown below under the heading of ‘descriptive’, which is the revised term given to qualitative specifiers, replacing Hagman’s original term, ‘modifier’. The set of purely descriptive (or qualitative) specifiers is fairly extensive, and is not illustrated at any length below. The item identified by Hagman as a ‘universal’ specifier, namely *hòá(rá(ká))* ‘all’, is here given under the more general heading of ‘quantifying’ specifiers, which also subsumes the order class of ‘number’. The label ‘modifying’ as used below refers to a small set of miscellaneous items used post-nominally. (The further possibility of qualification by means of an associative construction is self-explanatory, and will not be directly discussed here – although instances will occasionally appear in some of the example sentences below.)

The examples are largely from Hagman (1977: 30-40), but his orthography has been adapted to that of the current standard. (Hagman’s click accompaniment ‘x’ is replaced by ‘kh’; his plain click symbol is supplied with a following ‘g’, and his click symbol followed by overt representation of an ejected accompaniment is replaced by the plain symbol. His doubled vowels indicating length have been replaced by the macron, and his tilde indicating nasalized vowels is replaced by the circumflex.)

**Fig.V.3.** Examples of specifiers which may fill various slots of the noun-final NP in Khoekhoe.

<b>Demonstrative</b>	(Assoc.)	<b>Quantifying</b>	<b>Descriptive</b>	<u>Noun</u>	‘Modifying’
		+ Enumerative	[(Adverb)+Adj]	[N+pgn]	
<i>nē</i>	‘this’	‡gui ‘many’	nî ‘some’		‡û (‡unu)
‘self’					
<i>llnâ</i>	‘that, def.’	oro ‘few’	llkhā ‘the same’		‡hani
‘self’					
<i>nau</i>	‘that, other’	gui ‘one’	khara ‘other, alt.’		
		gam ‘two’	mâ ‘what?’		
		!noná ‘three’			
		hoa(ra(ka)) ‘all’			

The characteristic ‘head-final’ organization of the KHOE noun-phrase is seen in the examples below for !Ora, sourced from Meinhof (1930: 41), where the specifier is given in bold, and the noun it modifies is underlined. (One of the respects in which !Ora differs from Namibian Khoekhoe is its use of a demonstrative *he* for ‘this’ rather than the *nē* reflected above.)

### Demonstrative.

- (6) he hai-b 'this tree'  
(7) !na ʃ'ũ-b 'that food'

### Quantifying.

- (8) !nani tse-kua 'six days'

### Descriptive.

- (9) **thamsa** baxa-b 'soft/fresh/green tobacco'  
(10) **kai** khoe-b 'big man'  
(11) **kai** aba-s 'great/much snow'  
(12) 'aũ bi-b 'thick milk'  
(13) **gaida** 'ao-b 'the old man'

### V.3. Differences in the *kinds of construction* associated with specifiers.

V.3.i. Preliminary comments on the verb-like character of descriptive stems in some Khoesan languages.

V.3.ii. Kinds of construction associated with specifiers in JU and !UI-TAA languages.

V.3.iii. Kinds of construction associated with specifiers in KHOE languages.

#### V.3.i. Preliminary comments on the verb-like character of descriptive stems in some Khoesan languages.

The Khoesan languages in general have very small sets of 'true' adjectives, and a much greater class of derived descriptive stems, which are usually either deverbative or denominative. In addition, in the case of the JU and !UI-TAA languages in particular, many of the specifiers occur

in relative constructions, and so may appear to have a verb-like character. These properties of specifiers - concerning constructions they are associated with – may be summarized as follows:

(1) In the case of JU and !UI-TAA languages, which in this respect pattern very much like Bantu languages, the majority of descriptive stems (including certain demonstrative specifiers) appear in constructions of a relative type. However, the actual form of these constructions differs somewhat across the various groups:

i. In the case of TAA and !UI languages, the relative particle varies in form to reflect distinctions of gender.

ii. In the case of JU languages, the associated ‘relative particle’ reflects a singular-plural distinction, but is otherwise invariant.

As has previously been noted, some of the adjectives in JU and !UI-TAA may have suppletive plural forms. In those cases (not always found) where it is possible to isolate specific plural morphology, it may not always be clear whether its function is concordial or ‘derivational’. (The ambiguity arises particularly in the case of seemingly denominative expressions.)

(2) In the case of the KHOE languages, there do not appear to be any clear traces of a formal relative construction for specifiers. Nonetheless, as was observed by Rust (1965: 88), the patterns associated with the introduction of a relative clause as modifier of a noun in Nama predictably parallel the different grammatical treatments received by a simple specifier in equivalent structural contexts. In addition, at least the descriptive (i.e. qualitative) specifiers of Khoe may be divided into ‘true’ and ‘derived’ types, where many of the latter are deverbative. Lastly, a few of the specifiers in Khoekhoe (such as Nama |*nî*) may indeed be used with grammatical morphology of the kind ordinarily associated with verbs.

It will be appreciated that properties of the kind outlined above are not greatly out of the ordinary. It may even be valid to state that there is a general tendency throughout African families for languages to have only small and closed sets of ‘true’ or ‘absolute’ adjectives (non-derived morphemes with a dedicated qualificative function). For the rest, descriptive terms are typically derived from verbal or nominal stems. As a result it is not uncommon to find that certain specifiers (‘deverbatives’) may appear in quasi-relative constructions, in the sense that they employ some of the morphology associated with relative phrases; while enlisted nominals

may appear in construction-types that incorporate an associative element. (Predictably enough, verbal stems used for descriptive purposes are often verbs of process, and may express, e.g. through various ‘participial’ forms, some state either completed or still in process of being achieved.)

There are cases occasionally in African languages where even stems without any obviously verb-like ‘notionality’ may nevertheless be used in constructions of a ‘relative’ or ‘quasi-relative’ kind. For illustration of such a usage in Afroasiatic, reference can be made to Coptic. For example, in his discussion of the demonstrative pronoun in this language, Plumley noted (1948: ¶ 52-54) that it had an ‘absolute’ and a ‘construct’ form, adding:

‘As the Construct Form is used to express the Definite Article [...], in order to express such a phrase as ‘That man’, a relative clause is employed: *et-m-mau* ‘Who (or which) is there’, e.g.

p-rôme	et-m-mau	‘That man’,
n-hm-hal	et-m-mau	‘Those servants’.

[Transliteration as per Loprieno 1995: 25]

So as to demonstrate further the ordinariness of the pattern whereby relative constructions may be used in association with some specifiers not obviously ‘verb-like’, a chart is presented [overleaf] of qualificative stems from two different groups of Bantu languages, Nguni (illustrated by Zulu) and Sotho-Tswana (illustrated by Tswana). The illustrations show a selection of ‘true adjectives’ from each language - i.e. specifier stems used with the dedicated ‘adjectival concords’ - plus a sample of so-called ‘relatives’ - i.e. stems used with the concords ordinarily pertaining to relative constructions. The table also illustrates two small subsets, since it is possible in the case of some languages of this family to identify further sub-classes for certain of the enumerative and quantitative specifiers, on the formal basis of yet other distinctive concords. It will be seen that the sets of ‘true adjectives’ include at least some enumerative, quantifying and interrogative stems in addition to a few straightforwardly descriptive (i.e. qualitative) stems. Both example languages also have a few interrogative stems that pattern as ‘relatives’, and in addition, both include a few instances where a deictic component is incorporated into a relative stem. Of particular note is that several of the stems taking the relative concord have an origin that seems to be denominative, as indicated by the presence of the nominal prefix still visible in the stem.

**Fig.V.4.** Examples for two Bantu languages, showing descriptive, quantifying and demonstrative specifiers found across the formal division between adjectival and relative stems.

	Zulu (Doke 1950: 99-110)	Tswana (Cole 1975: 138-40; 173-4)
<b>'True' adjectives</b>	'c' =  ; 'q' = !	
<i>Qualitative</i>		
bad, evil	-bi	-be
long, tall	-de	-lê(1)êlê, -têl(ê)lê
short	-fuphi	-khutšhwabe
nice, good, beautiful	-hle	-ntlê
great, big [full-grown]	-khulu	-golo
black		-ntšho
new, young, fresh	-sha	-ša, fša
young, fresh, new		-nana
small, narrow, thin	-ncane	-sesane
very small	-nci	-nye, -ntje
<i>Quantifying</i>		
much, many	-ningi	-ntsi
other, some	-nye	-ngwe
two	-bili	-bêdi
<i>Interrogative</i>		
how many?	-ngaki?	
what colour?		-tsiang?, -tšang?, -tsabang?
<b>Relative stems</b>		
<i>Qualitative</i>		
raw, green, immature		-tala
red	-bomvu	
black	-mnyama	
strong, hard, difficult	-qatha	-thata
pleasant	-mnandi	-monate [denom.]
wet, damp	-manzi [denom.]	-mêtse [denom.]
sharp	-bukhali [denom.]	-bogale [denom.]
acid, salty	-munyu [denom.]	
speckled, spotted	-zibadu [denom.]	
speckled, spotted		-kgaka [denom.]
light [not heavy]		-mothôfo [denom.]
neat, orderly	-nobunono [denom.]	
a certain, said	-thile, -thize [deverb.]	
<i>Interrogative</i>		
how much, many?	-ngakanani?	
of what kind?	-njani?	
how much, how big?		-kaé?
<i>Deictic</i>		
like this	-nje	
like that	-njalo	
like yonder	-nje:yá	
so much/big as this	-ngaka	-kana
big as that	-ngako	-kalo
big as yonder	-ngakayá	
<b>Enumerative stems</b>		
one	-nye, (-chwe [hlonipha])	-ngwe
a different one	-mbe	
any, some		-pê
which?	-phi?	-fe?
what/ what kind?	-ni?	-ng?
<b>Quantitative stems</b>		
all, the whole [Incl.]	-nke, -nkana	-tlhê
only, alone [Excl.]		-si
only, alone [Excl.]	-dwa	

It seems unsurprising that the general observations made above should apply also to the Khoesian languages of southern Africa. The question arises whether those specifiers that appear in the relative constructions of the JU and !UI-TAA languages should necessarily be considered to have an actually deverbative origin. One response might be that this is *unlikely* to be the case, and that an accidentally ‘verb-like’ appearance has simply been bestowed on certain stems, including some demonstratives and interrogatives, merely as a result of their participation in head-modifier constructions that happen to be formally of the relative type - much as may be the case in Bantu languages, where the concords of the relative construction may be used in association with descriptive specifier stems that seem unambiguously denominative, as well as with demonstrative, interrogative, quantificative and enumerative stems. (In the abstract, a ‘relative construction’ is simply a device, often with an underlying deictic component, that serves to relate - by cross-reference - a predicate of specification to an argument. In a purely logical sense, the qualifying predicate need not necessarily be anything that finds expression in a verb, but may be a property, or a locus, or even another argument.)

Nevertheless, it is a fairly widely-found phenomenon (with traces found also in Indo-European, as noted in an earlier chapter) that certain types of *locative* morpheme may arise from grammatically enlisted verbs of motion. That verbs of directional movement might also give rise at least to *demonstrative* specifiers would not be altogether surprising; and suggestions are indeed sometimes made concerning an actual verbal origin for certain of the specifiers in JU and !UI-TAA, as will be seen below. It will also be seen that certain of the KHOE specifiers (at least in the Khoekhoe branch) likewise present occasional traces of ‘verb-like’ behaviour.

### 3.ii. Kinds of construction associated with specifiers in JU and !UI-TAA languages.

#### **JU.**

The relative construction in Ju |’hoan is linked to the use of a form *-à* in association with a singular noun, and *-sà* in the case of a plural. The singular *-à* may be preceded by a glide, predictably palatal after front vowels, and labio-velar after back vowels. In the older analysis of Snyman (1970: 95), the post-nominal particle *-à* was treated as just one manifestation of a more widely used ‘transitional *-a*’. It was identified specifically as a relative particle by Dickens (1997), who found it to be characterized by a distinct tonal feature. The construction is clearly visible in the figure below, which tabulates some of the possible exponents of descriptive, quantifying and demonstrative specifiers for Ju|’hoan. The tabulation also reflects a distinction

between stems associated with a relative construction, and ‘true’ forms which occur independently.

**Fig.V.5.** Some exponents of descriptive, quantifying and demonstrative specifiers in a JU language.

**Note.** These are sourced mainly from Snyman (1970: 94-119), but in some cases Dickens (2005: 48), with orthography adapted to the current standard of Dickens (1994), except for the ejected affricate click accompaniment, which Dickens represents, for example, as !k’, but which is here shown as !kx’. There are one or two discrepancies between the accounts given by Snyman (1970) and Dickens (2005). For example, Snyman reported (p. 95) that the words meaning ‘old’ and ‘worn out’ were used in the ‘regular’ pattern that required the ‘transitional –a’, whereas Dickens (p.29-30) lists them as members of the small set of adjectives used *without* the relative construction.)

Descriptive		Quantifying (+ Enumerative)		Demonstrative
<i>‘true’ adjectives</i>		<i>‘true’ forms</i>		-
jàn	‘good, right’	n úi	‘one, next, certain’	
ʃ'àng, !'àn	‘old, worn’	!'àè	‘self, selfsame’	
!hoàn	‘real’	n è'é	‘one, single’	
n#ù	‘black’	tsàqn, tsán	‘two’	
zé, zàqí	‘new’	n!ànì	‘three’	
dóré	‘strange, other’	!xàré	‘few, some’	
		waqnhè, waqnkè	‘each, every’	
		waqnsì, wècè(sì)	‘all, the whole’	
		kx'oromh	‘few’	
<i>relatives</i>		<i>relatives</i>		<i>relatives</i>
!hóm	‘beautiful’	ʃ'hái	‘many’	hè, kè ‘this’
jó	‘black’			to'á ‘that’
g#à'ín [sg subj]	‘long’ (g#à'ìàn [pl subj])			ú to'á ‘yonder’
gàq'ú	‘holy, pure, clean’			
ʃkx'àò	‘damp’			
eun,  ãng	‘yellow’			
n#hòqí	‘salty’			

As the table reveals, the division of specifiers into ‘true’ and ‘relative’ groups (i.e. on the basis of the formal constructions they take) seems to cut across their division (i.e. on any functional basis) into ‘descriptive’, ‘quantifying’ or ‘demonstrative’ sub-classes. However, the categorization of #áí ‘much, many’ as a quantifier is largely based on a notional criterion. If this item were rather to be placed together with the ‘descriptives’, then the remaining set of quantifiers would have a formal integrity – in that they are used uniformly *without* the relative construction. (The demonstrative specifiers have a converse type of unity in that they always appear in the relative construction.)

Concerning the phenomenon of verb-like *demonstrative* specifiers in Ju|’hoan, Dickens (2005: 49) commented as follows:

‘In Ju|’hoan, **hè** ‘this/these’ and **to’á** ‘that/those’ are [...] verbal in nature and can be thought of literally as ‘be here/be this one’ and ‘be there/the that one’, respectively. When qualifying a noun, they must, like any other verb, be preceded by a noun with a relative suffix.’

Dickens gave the following examples (where the plural form *-sà* of the relative-associated construction is seen in the second sentence):

(14) Jù-à **hè** !óá mí

Jù-à	<b>hè</b>	!óá	mí
Person-RELsg	BE-here	tell	PRO1 <sup>st</sup> sg

‘This person (person-who-is-here) told me.’

[Dickens 2005: 49]

(15) N!oh-sà **to’á** |óá n!óm

N!oh-sà	<b>to’á</b>	óá	n!óm
Orange-RELpl	BE-there	NEG	ripe

‘Those oranges (oranges-which-are-there) are not ripe.’

[Dickens 2005: 49]



## !UI-TAA.

For !Xóǝ, Traill (1994: 21) gives a number of sentences to illustrate the principle of concord, where the variable expressions of agreement may have as their locus not only the verb, but also adjectives and relative pronouns. These sentences supply convenient examples of descriptive expressions that appear to be true adjectives - e.g. !xàV 'big' - as well as stems of the type that require a relative construction - e.g. !ʔáa 'dead' - as in the following:

(16) n̄ a |nai |ǎi !xài tí |ʔáa |fi ki

n̄	a	na-i	ǎ-i	!xà-i
PRO1 <sup>st</sup> sg	Past	see-[1]	lion-[1]	big-[1]
t-i	ʔáa	fi	k-i	
RelPRO-[1]	dead	BE	ResumPRO-[1]	

'I saw a large dead lion.'

[Traill 1994: 21]

**Note.** Traill's concordial sub-class '1' is associated with pronominal agreements in *ih*.

As far as !UI languages are concerned, a particularly clear statement of the 'verb-like' behaviour of certain specifiers was given by Lanham and Hallows (1956a) in their discussion of !Xegwi:

'Because of their grammatical behaviour, it is necessary to classify as verbs, certain forms whose significances are seldom expressed by verbs. Thus many "adjectival" concepts and the numerals are conveyed by the predicative in a relative clause'.

They expanded on the behaviour of these forms in a note as follows:

'For instance, a number of the forms referred to here make use of [...] verbal suffixes [...] which are associated only with verbal roots, e.g. !e (be red) in c'eo ʔela !e-ya (red stone).

Lanham and Hallowes (same paper) gave the following examples of verb-like descriptive predicates:

**Fig.V.6.** Data-set of quasi-verbal specifiers in !Xegwi, after Lanham and Hallowes (1956a).

!ŋaa	‘be long’	klʔini	‘be small’
llkxwa	‘be bad’	ʃaa	‘be white’
djwaa, djwāã	‘be black’	!e	‘be red’
llkxee(xo)	‘be big, old’	swĩĩ	‘be fat’
!waa	‘be one, be alone’	kʔuu, cʔuu	‘be two’
gwana	‘be three’	kʔuuŋ, cʔuuŋ	‘be four’

It seems likely, however, that !Xegwi probably patterned much like !Xam, which seems to have had in addition to ‘verb-like’ stems of the kind illustrated above a small class of ‘true’ adjectives. The examples below illustrate some of the very few ‘true’ adjectives discernible in !Xam - where ‘true’ here means simply that these specifiers follow the noun without relative morphology.

- (17) !k'oussi llkaŋ ‘new little-kaross’ [*Specimens: 212-3*]
- (18) !khwa llkãŋ ‘fresh water’ [*Specimens: 314-5*]
- (19) !kauö-kən !ké-!ké-ttən ‘great stones’ [*Specimens: 290-1*]
- (20) ttwĩ ttss'óro-kən ‘the old wound’ [*Specimens: 332-3*]

It will be seen in example (19) that the plural noun *!kauö-kən* takes an adjective that expresses agreement with it in number (by means of a reduplicated plural form).

The examples in the following further set for !Xam show the more predominant ‘non-KHOE’ pattern, where specifiers occur in association with quasi-relative constructions. As in the case of JU, specifiers taking the relative construction may include quantifiers and demonstratives. (Note that the relative particles of !Xam reflect the system of genders, and - as suggested by Dorothea Bleek (1928) - probably arise by coalescence of a gender-specific co-referential pronoun (*a* or *i*) with the copular (locative existential) morpheme *a* (often indicated as high-toned). They appear as follows:

**Fig.V.7.** Relative pronouns of !Xam.

	Singular	Plural (or non-count)
Gender I <animate>	ā	ē
Gender II <misc.>	ē	ē

#### **Descriptive.**

- (21) !khwétən ā !hóäka ‘black lightning’ [Specimens: 116-7]
- (22) !lxóë ā !xárra ‘a different place’ [Specimens: 304-5]
- (23) !ʔwa: a: !ku:ka ‘a dead hartebeest’ [Specimens: 2-3]
- (24) !xábba ē tta !í ‘hot soup’ [Specimens: 122-3]

#### **Quantifying.**

- (25) !ka:gən e: !kū ‘two (ostrich) wives’ [Specimens: 142-3]
- (26) !ke kuitən ē !kù ‘two other persons’ [Specimens: 128-9]
- (27) !lnein ā !kwai ‘each [‘one’] hut’ [Specimens: 274-5]

At least one of the stems above appears to have a transparently deverbative origin, namely,  $|ku:ka$  ‘dead’ in (23), seemingly being a form of  $|ku:$  ‘put, put away, place, set, [...] be ill’ (cf. Bleek 1956: 322). The termination  $-ka$  seen in this specific example was identified by Dorothea Bleek (1928) as belonging to a set of verbal endings,  $-wa$ ,  $ja$ ,  $-ka$  and  $-ta$ , which she described as seeming ‘to indicate the imperative, an applied form, a participle, or the passive’. However, an alternative possibility is that  $-ka$  above expresses a perfect – being perhaps one of the variant forms taken by the verbal ending  $-a$  in contexts where a verb already ends in  $-tən$  or  $-kən$ . This verbal ending  $-a$  was identified separately by Bleek herself (1928), who commented that it:

‘sometimes [...] expresses the perfect, sometimes it is used after *se* as the subjunctive, sometimes it seems to be used as an applied form, but then again there are cases where no reason can be found for its use.’

Concerning demonstrative specifiers in  $|Xam$ , Dorothea Bleek noted (1928) that:

‘The demonstrative adjectives **ha** and **hi** ‘this, these’ are similar in form to the personal pronouns ‘he, they’, but they are spoken with more emphasis. They *precede* the nouns they qualify. **A:̄a** ‘that’, **e:̄a** ‘those’ *follow* the nouns they qualify. They probably represent the relative pronouns and the verb ‘to be’: ‘!kwi a:̄a ‘a man who is, that man’.’

In a later work (1939), Bleek gave a more generalized grammatical sketch, in which she reformulated her earlier remarks on the demonstratives of  $|Xam$ , and noted that in addition to constructions of the type above:

‘the verbs  $|ke$  ‘to be always’ and  $llna$  ‘to stay’ are often used as ‘younder’, ‘there’.

These verb-like forms seem to have somewhat more demonstrative force than either the pre-nominal forms *ha* and *hi* (possibly discourse deictics), or the post-nominal forms used in relative constructions. (It is possible, however, that they are closer to being adverbs than specifiers.)

### V.3.iii Kinds of construction associated with specifiers in KHOE languages.

The specifiers of KHOE are not found quite so strikingly in verb-associated constructions as those of the ‘non-KHOE’ languages. Nonetheless, Hagman (1977: 39-40) observed certain features of the indefinite quantifier (or ‘demonstrative’) |nî that are indeed suggestive of a residual verb-like quality. For example, he noted that it may be used in construction with ‘the verb root *hâ* “to exist, to be (in a place)”’. The resulting expression |nî *hâ* ‘a certain’ (which closely resembles the perfect form of a stative verb) may even be modified by the adverbial *llkhapa* ‘again’. Hagman gave the following example (shown with updated orthography):

(28) |nî hâ llkhapa khoëb ‘a certain other man’

(This specifier is unlikely to be a loan, given that it is reconstructed by Vossen (1997) as PKal \*|nî.)

In the main, though, the distinction of a small sub-set of the specifiers in Khoekhoe languages as ‘true’ adjectives generally lies merely in their non-derived status. This distinction applies largely to just the descriptive specifiers, although it could be argued that *kai* ‘big, great, much’ and \**khari* ‘small, little, few’ are at least (from a notional point of view) partly quantificational.

Hagman noted for Nama (1977: 67) that it contains only a small set of ‘simple’ or ‘monomorphemic’ adjectives. The brief set of examples he gave has been expanded below to include additional items from Haacke and Eiseb (2002), and are orthographically updated.

**Fig.V.8.** Some ‘simple’ (i.e. non-derived) adjectives of Namibian Khoekhoe, after Hagman (1977: 67), with updated orthography.

au	‘bitter’	‡nū	‘black, dark’
hoa	‘long, wide, distant’	‡goro	‘thin, lean’
kai	‘great, much’	‡khari	‘little, few’
kawa	‘new’ [S, Hm]	‡kham	‘young’
		‡khanu	‘smooth, polished, slipper’
		‡haba	‘broad’
		‡hanu	‘right, correct’
ui	‘thin (of long thing)’	!uri	‘white, light’
gū	‘near’	!nū	‘far, remote’
óró	‘old, worn-out, rotten’	!nuwu	‘short’
khoa	‘strong’	!anu	‘clean, holy’
â	‘wet, fresh’	!am	‘green’
apa	‘red’	!gâi	‘good, pleasing’
		!gari	‘hard, strong’
llgaa	‘thin, flimsy’	!khai	‘cold’

The derivational morphology found on the remaining descriptive stems is usually indicative of a deverbal or denominal origin, but, as already noted, the former do not appear to be used with any additional morphology - i.e. of a kind to suggest any actual relative construction.

Hagman gives some examples (1977: 31-33) of the morphology associated with *denominative* derivation, citing the adjective ‡ō-xa ‘salty’, where the productive morpheme -xa adds an implication similar to ‘-ful’ in English. He also gives the example llgam-xa !khai-s ‘the watery place’, and contrasts this with llgam’o !khai-s ‘the waterless place’, where ‘o is the so-called ‘privative’ morpheme translatable as ‘-less, lacking, without’. *Deverbative* descriptive stems are frequently formed by a suffixed -sa, which Hagman explains (p. 31) as yielding ‘the meaning “able to be \_ed”’. The following mini-table lists examples (sourced from Haacke and Eiseb 2002) of specifiers in Khoekhoegowab with visible derivational morphology:

**Fig.V.9.** Some derived descriptive specifiers in Namibian Khoekhoe – illustrating both denominative and deverbative stems.

ûi-sa	'living, alive'	a(a)sa	'new'
llui-sa	'fat, wealthy, thriving'	!nao-sa	'tall'
karo-sa	'hardened'	gai-sa	'strong'
‡gawa-sa	'thin, hollow-bellied'	‡oa-xa	'windy'
gam-sa	'hot'	llkhôa-sa	'hot (of fire)'
uri-sa	'dirty'		

Further to this, Khoekhoe languages have various verbs of process which can be used in a perfect form (i.e. in combination with the 'stative auxiliary verb' *hã* which forms a 'past participle') to denote stative outcomes, such as *llô-hã* 'dead'. Hagman (p. 67) lists the following examples for Nama:

**Fig.V.10.** Some stative verbs of Namibian Khoekhoe, after Hagman (1977: 67).

!â	'get hungry'	ae-sen	'get sick (reflex.)'
llgâ	'get thirsty'	llâ	'get satisfied'
!khû	'get rich'	llô	'die'

An inevitable consequence of the fact that Khoekhoe languages (and KHOE languages in general) have various productive strategies for the coining of *descriptive* terms is that the class of these particular specifiers is potentially open – and hence perhaps not sufficiently 'constrained' for purposes of cross-SAK comparison. So as to reduce the possibility of introducing spurious affines, the descriptive specifiers (i.e. 'qualitative stems') presented in the Main Tables for this chapter are restricted to: (i) adjectives (or the verbs and nouns from which they may have arisen)

for which Khoe reconstructions have been presented by Vossen (1997); and (ii) items that fit closely and plausibly into the same semantic fields as any of these.

To recapitulate the main points of the preceding section: it has been noted that the JU and !UI-TAA languages as a group are particularly characterized by the use of specifiers (of various kinds) found in relative constructions. At the same time it has been noted that in a wider crosslinguistic context, a ‘quasi-verbal’ character for specifiers is not a greatly unusual phenomenon - which means that the property cannot be considered uniquely distinctive of these languages. In addition, traces of verb-like behaviour are manifested by at least one (reconstructed) specifier in KHOE. Taken together, these factors suggest there is no need to rule out as potentially cognate cross-SAK items any specifiers that present synchronically in different types of construction or word classes. Such divergences may have arisen merely as the result of differing grammaticalization processes. (That such divergence has occurred is suggested by the circumstance that the essential equivalence of some items across the SAK spectrum may not be apparent until they are considered in terms of their function, or underlying meaning.)

The discussion so far has indirectly offered illustrations of specifiers fitting mainly into categories such as descriptive, demonstrative and quantifying (including enumerative). A few selected functions of particular specifiers are more directly discussed in the sections below.

#### **V.4. Functions of specifiers not directly treated in the course of discussion above.**

V.4.i. Use of demonstrative specifiers for purposes of ‘discourse deixis’.

V.4.ii. Particularity of reference: the role of specifiers - and other grammatical morphemes - in delineating aspects of singleness, uniqueness and identity.

It was noted at the outset that one of the functions of specifiers within a noun phrase seems to be to narrow down the range of potential reference of the nominal expression. It was mentioned as well that specifiers may also be enlisted for purposes of ‘discourse deixis’, or to define more sharply various aspects of the designated referent’s involvement in the event expressed by the predicate.

It not uncommonly happens that the same morphology is used for several of these functions – while some of the functions may themselves overlap in turn. From a comparative perspective,



the resulting picture may be fairly complex, and affinities may only be apparent once underlying commonalities of a function (or a source word) are taken into account. The purpose of the discussion below, concerning various particular aspects of function, is to try and unravel some of these threaded intersections.

The two topics concern the use of demonstrative specifiers for purposes of ‘discourse deixis’; and the highly complex and inter-related expression of various kinds of ‘particularity’ (where the sense of this term will be explained in more detail below).

#### V.4.i. Use of demonstrative specifiers for purposes of ‘discourse deixis’.

In the context of any ongoing discourse, the topic will often as not already have been introduced, and this ‘*already-known*’ or ‘definite’ status is then coded by various strategies, which are perhaps most commonly based on deixis and anaphor. In some Bantu languages, descriptive morphemes meaning ‘said’ may be introduced (almost periphrastically) to specify a ‘previously mentioned’ status - for example in Zulu, where the relevant stem is the perfect form *-thile* <-*thi* ‘say’ (which has its equivalent in Herero *-rive*). The more usual strategies in Bantu, however, generally involve enlistment of absolute or demonstrative pronouns, used in apposition. (The demonstrative pronouns of Sotho, for example, distinguish three degrees, where each ‘position’ has two forms, one of which may be used for purposes of inter-sentential cross-reference.)

There is no reason to assume that Khoesan languages will be exceptional in this regard, and so it is unsurprising that some of the diverse demonstrative expressions in these languages are used more often for discourse deixis than for actual spatial ‘ostension’. (Some of the substitutive pronominal forms now seen may even have arisen from formerly demonstrative elements used in this way. This is a natural development cross-linguistically, and is of course the very process that gave rise to the 3<sup>rd</sup> person pronouns of Indo-European.)

In the JU and !UI-TAA languages, demonstratives are seen to play a typical role in discourse deixis. The following lines are from a longer sample of extended discourse provided by Snyman (1970: 119) to illustrate such processes in Ju|’hoan. (Note that the original orthography is kept in this quotation. The particles *re* and *nĩ* in line (iii) are both glossed by Snyman (c. 1975) as interrogative.)

(29) Gwaha žu n|wi dž'aa mi meri te !haa-u.

[...]Mi teni-še ha ko komtsa khweya

Te !wa ha ko žuwa he re nĩ duwa

[...] |em n|wi žuwa to'a n#e-u zi-tš'uwa.

(i)	Gwaha	žu	n wi	dž'aa	mi	meri	te	!haa-u	
	Long.ago	person	some	steal	possPRO1sg	money	CONN	run-GO	
(ii)	[...]Mi	teni-še	ha	ko	komtsa	khwe-ya			
	PRO1sg	carry-RETURN	PRO3 <sup>rd</sup> Isg	KO	commissioner	place-a(compound?)			
(iii)	Te	!wa	ha	ko	žu-wa	he	re	nĩ	du-wa.
	CONN	tell	PRO3 <sup>rd</sup> Isg	say	person-REL	DEMprox	?	?	do-a(trans)
(iv)	[...]  em	n wi	žuwa	to'a	n#e-u	zi-tš'u-wa.			
	day	some	person-REL	that	CAUS-GO	“latrine”[Sn 1975]a (compound)			

‘Long ago somebody stole my money and ran away.

‘[...] I brought him back to the commissioner’s place

‘and told him what this person had done.

‘[...] someday that person will go to jail.’ [Snyman 1970: 119]

The topic in the fragment above is introduced first with indefinite specification, as *žu n|wi*

‘someone’ (*ju n|wi*), and is subsequently either substitutively referred to by means of the gender-specific anaphoric pronoun *ha* - line (ii) - or else is correlated with the previously mentioned referent by means of the demonstrative specifier *he* – line (iii) In the last line, the remote demonstrative - *to'a* - is chosen. (There are two different strands implicated in this discourse, since it is not only informational status that is being coded, but also the scope of reference. The speaker clearly has a specific individual in mind, but chooses to leave the range of possible referents open-ended - from the point of view of the other participant.)

Previously mentioned status in JU may also be indicated by pre-placement of the ordinary *anaphoric* pronouns, where they then have a deictic function, as in the examples below from Dickens (2005: 63):

- (30) **Ha** dshàú ‘that (previously mentioned) woman’  
 (31) **Ká** !à!hn ‘that (previously mentioned) tree’

Dickens further notes for Ju!’hoan (2005: 61) that:

‘In subsequent mentions of [a] topic, it is usual to place ll’á before the noun phrase and add the suffix -à (or in the plural -sà) ....’

He gave the following example:

- (32) ll’a jù-à kú !aàh

ll’a	jù-à	kú	!aàh
DEM(?)	person-REL	Impfv	run

‘The (that) person was running.’

[Dickens 2005: 61]

For the !UI languages, the remarks of Bleek (1939) have already been noted, concerning the use of a verb *llna* ‘to stay’ in the sense of a quasi-deictic ‘yonder, there’. That this morpheme might also have been used for purposes of discourse deixis is less clear; but it nonetheless appears to have been used in a number of other capacities. For example, there are cases in the |Xam texts where the function of *llna* is ambiguous between that of a (directional) locative adverb and that of a limitative; while the following example shows an instance of *llna* being used as an apparent existential copula:

(33) Ssi xa sse ll̃koen tch̃uɛŋ ē ll̃na !gwa:⁹xu

Ssi            xa        sse        ll̃koen tch̃uɛŋ ē                    ll̃na            !gwa:⁹xu  
PROI<sup>st</sup>plExcl NEG IRR look.at things RelPROIpl BE.there sky-ku

‘We should not look at the things which are in the sky’                    [*Specimens: 66-67*]

A verb of this general kind – meaning ‘sit, stay’ dwell’ - seems to have occurred across the N|uu spectrum. It was recorded by Bleek herself in ll̃ŋ !ke (ed. Güldemann 2000) and seems to have had affinities also with a #Khomani verb used both as a main verb meaning ‘stay with’ or ‘BE.at’, and as a secondary verb with ‘limitative’ implication. Maingard (1937) commented on the #Khomani form as follows:

‘An interesting extension of this [“double verb”] usage is to be found in the word ll̃ŋa, which still functions as a verb, e.g. *ŋa ll̃ŋa ʔa*, “I stay with you.” When pointing to place, the speaker will say: *ti ll̃ŋa*, “there!” Further, ll̃ŋa is frequently a form of emphasis strengthening the previous statement.’

Here it is simply noted that the Namibian Khoekhoe ll̃an means ‘live stay, dwell, reside’.

As for the use of similar demonstrative morphemes in KHOE languages, Hagman (1977: 29; 38-40) commented as below in reference to the proximal (*nē*) and distal (*ll̃nā*) deictic specifiers of Nama. (Note that his original orthography is preserved in the quotation.)

‘The word ll̃nāa is used much more frequently in Nama than is the word “that” in English and represents a much lower degree of deixis comparatively; we often have to translate

*llnãa* with the English article “the” though, then, the degree of deixis in the gloss will probably be too low. A certain indication of this low degree of deixis is the fact that *llnãa* may never be used contrastively with *nee*. For example, if there are two individuals, one nearby and one farther away, a speaker would never say \**nee kxòep tsîi llnãa kxòep* to mean “this male person and that male person”. He would say rather *nee kxòep tsîi náú kxòep*.’

The deictic force of a further demonstrative *nau* similarly seems to weaken when it is used for purposes of discourse-internal reference. Hagman further noted (1977: 38-39) that he found *nau* - in a particular folktale - only occurring:

‘before a noun when one previously-mentioned character, whether present or not, is being contrasted with another. In that case, *nee* or *llnãa* occurs preceding the noun which denotes the most recently mentioned character, and *náú* before that which denotes a character mentioned yet earlier.’

(Concerning two other expressions often grouped with the demonstratives, Hagman noted that their functions can likewise only be adequately explained in terms of their inter-sentential roles. These are *llkhã*, glossed by Haacke and Eiseb (2002) as ‘(self)same/ identical (of: one thing seen twice); similar/ identical (of: separate things)’, and *lɲí*, glossed by Haacke and Eiseb as ‘other (unspecified pl.), another, an(y) alternative; some; some or other; a certain (unknown).’ These will not be discussed here, since they can be placed into other categories on the basis of notional definitions.)

The question arises whether the (apparently deverbative) demonstrative *llnã* is genuinely common to the SAK languages as a whole, or whether one of the groups (or sub-groups) has merely adopted it. The fact that Vossen has been able to reconstruct this demonstrative for Proto-Khoe (PK \**llã* > PKK \**lla*; PKal \**llna*) strongly suggests that this morpheme is at least an original part of the KHOE group. At the same time, the presence of a very similar morpheme in languages representing *both* the JU and !UI-TAA groups makes it seem likely that it is intrinsic

to the ‘non-KHOE’ languages as well. Apart from the distribution across JU and !UI-TAA, there is something non-trivial about the extent of this morpheme’s ‘embeddedness’ within ‘non-KHOE’ languages, at least in the !UI branch, where it has a seemingly complete distribution throughout the southern dialects - as well as apparent links to a verbal root which additionally has the role of a fairly basic grammatical element, both as a limitative of some kind, and also as a type of locative existential copula. If the !UI languages had merely borrowed this term as a straightforward demonstrative, it seems unlikely that it would have either the verbal associations or this range of uses.

V.4.ii. Particularity of reference: the role of specifiers – and other grammatical morphemes – in delineating aspects of singleness, uniqueness and identity.

In the process of narrowing down the scope of reference of an expression, the specifiers inevitably introduce a degree of particularity. It is natural that deictic morphemes should play some part in this type of specification, but various degrees of narrowing may also be expressed, of course, by quantificational and sometimes actually enumerative specification, i.e. by means of morphemes with implications such as ‘some or other one’, ‘any’, ‘one only’, ‘another (similar)’, ‘another (different)’, ‘two the same’, ‘a few’, ‘many’, ‘each one’, ‘all’, or ‘the whole of’.) It is perhaps not surprising, therefore, that the characterization of particular morphemes as demonstrative or quantifying may not always be clearcut. As noted earlier, for example, Hagman follows older authors such as Meinhof (1909: 61) and Rust (1965: 43) in analysing Nama *!nî* ‘some’ as a demonstrative, although it is at least in notional terms an indefinite quantifier, implying ‘some one or another’ (much like such local Bantu stems as Ndonga *-mwe*, Zulu *-nye* or Tswana *-nngwe*).<sup>1</sup>

Since ‘particularity’ may come down in some cases to an indication that the set of valid potential referents contains only a single member, natural quantifiers may coincide with terms for some of the lower order enumeratives, such as ‘one’ (cf. Ndonga *-mwe*, Zulu *-nye* and Tswana *-ngwe*). Even so, ‘singleness’ in itself does not automatically imply ‘uniqueness’, and further strategies of still more precise specification may be required if the latter is intended.

This particular sense of unique (or sole) reference may intersect in turn with other categories of uniqueness or identity. For example, many languages have the morphosyntactic means (and sometimes the obligation) to refine certain aspects of the designated referent’s role in the

situation, process or action -by indicating: *co-identity* with an already determined (i.e. previously mentioned) referent (cf. ‘That selfsame man did it’); or the *sole or comprehensive role* of the referent (as in, ‘He alone did it’, or ‘He did it all by himself’). In reality these distinctions may well overlap (as even illustrated by the occurrence of the morpheme ‘-self’ in both of the English phrases). The same morphology may also feature in constructions used to express *reflexive* and *reciprocal* implications (as, for example, in English, which in the first case again uses ‘-self’).

Just as in the case of the English examples quoted, the morphemes used to express these diverse implications are not uncommonly seen to overlap in languages of Niger-Congo and Nilo-Saharan. For example, in certain languages of West Africa, up to four types of identity may be expressed, including reflexivity, reciprocity, and an ‘emphatic reflexive’ - often by means of a morpheme fairly transparently relatable to a noun meaning ‘body’.<sup>2</sup> A parallel usage is occasionally seen in Khoesan languages. (In the case of !Xóǝ, for example, Traill’s dictionary entries show that ‘*Onāhā* seems to mean both ‘true’ and ‘body’.)

In a few Bantu languages, morphemes meaning ‘self’ or perhaps ‘owner’ (e.g. outcomes of PB \*-jéné or \*-méné) may be used for a similar purpose (cf. English ‘very own self’), but in addition even seem to have given rise occasionally to a distinct relative pronoun, and furthermore suggest a possible source of focus particles such as *ne*. (One or other of these roots is probably the source of south-western forms such as Ndonga *-ene* ‘selfsame’.) In yet other languages, expressions meaning ‘true, real’ may be used for a similar purpose - cf. the English use of ‘very’ in ‘that very same man’. Some languages alternatively use local periphrastic idioms; while, lastly, morphology is sometimes seen that is simply opaque.

Not unexpectedly, a similar sheaf of strategies is available in Khoesan languages. In Namibian Khoekhoe, for example, the meaning ‘same, selfsame’ may be conveyed by the adjective *llkhā̄*, concerning which Hagman wrote (1977: 39) that:

‘It is used preceding a noun to emphasize that the referent of that noun is exactly the same as the referent of a noun which has occurred in a closely preceding sentence.’

It will be seen below that a very similar morpheme, with similar implications of identity, occurs in other SAK languages (even though it may take on slightly different functions). Lastly, Haacke and Eiseb note (2002: 194) that the enumerative *lgui* ‘one’ may also be used as an adjective to

mean ‘similar, identical, equal’ (in much the same way that Bantu languages may use the equivalent morpheme, namely outcomes of PB \*-mòì).

The remainder of this discussion concern the use of specifiers (or other grammatical morphemes) to indicate some of the degrees of particularity sketched above. It will be appreciated that, for all of the reasons discussed above, it is not always possible to isolate a particular function (or grammatical category).

*Reflexives and reciprocals.*

### **KHOE.**

For the expression of reflexives and reciprocals, the KHOE languages make use of verbal extensions, which need not be further discussed here. (These have been reconstructed by Vossen (1997: 352-3) as: PK \*-sani (> PkaK \*-sani, PKK \*-sen) for the reflexive, and PK \*-ku for the reciprocal.)

### **JU.**

In Ju|’hoan, the *reciprocal* is expressed by a morpheme *khòè*, illustrated by Dickens (2005: 91) as follows:

(34) Jú kú ll'ààn **khòè**

Jú kú ll'ààn khòè

People Impfv fight RECIP

‘The people are fighting one another’

[Dickens 2005: 91]

The effect of the construction is to allow for the participation of different arguments in a role that has identity in relation to the predicate.

On the other hand, *reflexives* in Ju|’hoan are based on a morpheme |'àè ‘self’, illustrated by Dickens (2005: 89) as follows:



(35) Mí nllá mí |'àè

Mí            nllá    mí            |'àè  
PRO1<sup>st</sup>sg    mean   PRO1<sup>st</sup>sg    self

'I mean myself'

[Dickens 2005: 89]

(36) E kú séa è |'àèsi kò spíri

E            kú    sé-a            è            |'àè-si kò    spíri  
PRO1<sup>st</sup>pl    Impfv   look-a(trans)   PRO1<sup>st</sup>pl    self-pl   KO   mirror [< Afrik.]

'We are looking at ourselves in the mirror.' [Dickens 2005: 89]

The construction specifies identity of the 'subject' and 'object' arguments.

The same morpheme may also be used, according to Dickens (2005: 90), to construct what he terms an '*emphatic reflexive pronoun*' when it is combined with *hà*:

(37) Mi |'àèhà úá Tjùm!kúí

Mi            |'àè    hà    úá            Tjùm!kúí  
PRO1<sup>st</sup>sg    self    HA    go-a(trans)    Tsumkwe [place-name]

'I myself went to Tsumkwe.'

[Dickens 2005: 90]

(38) !Aqèkxàò ho n!hoan |'àèhàsi

!Aqè-kxàò    ho    n!hoan |'àè-hà-si  
hunter            find    kudu    self-HA-pl

'The hunter found the kudus themselves.'

[Dickens 2005: 90]

The implication here is of some particularity (or even uniqueness) of the intended referent, with an associated coding of identity (perhaps also on the basis of previous mention).

It was noted earlier that it is not unusual, crosslinguistically, to find a ‘dummy’ term meaning ‘body’ used for at least some of the inter-linking specifications described above. It is noteworthy that Dickens mentions an alternative way of expressing the type of ‘emphatic reflexive’ implication, in a construction based on *ámá/ ámási* ‘body/ ‘bodies’. He gave the example:

‘!Aqèkxàò ho n!hoan **ámási**; ‘The hunter found the kudu themselves.’

Lastly, the adjective, [’àè ( [’àèsi in plural), mentioned above can also be used in the context of *inter-sentential* cross-reference. This usage is illustrated by Snyman (1970: 119) in the following extract - with original orthography retained in the quotation - which also shows the interplay with definiteness:

(39) Komtsa !wa !’hwã he te ko

ha teni-še mi meri

te ha kwe du.

Gwã#’a žuwa he !’e

šete dž’aa Kx’ao ll’a peri

te !hũ ha te ’m ha.

Komtsa	!wa	!’hwã	he	te	ko
Commissioner	tell	man	DEMprox	CONN	say

ha	teni-še	mi	meri
PRO3 <sup>rd</sup> Isg	carry-RETURN	possPRO1sg	money

te	ha	kwe	du
CONN	PRO3 <sup>rd</sup> Isg	thus	do

Gwəʦ'a	ʒu-wa	he	'e [  'àè]
Yesterday	person-REL	DEMprox	selfsame
šete	dž'aa	Kx'ao-ll'a	peri
again	steal	Kx'ao-Assoc	goat
te	!hũ	ha	te 'm ha.
CONN	kill	PRO3 <sup>rd</sup> Isg	CONN eat PRO3 <sup>rd</sup> Isg

'The Commissioner told this man and said  
 'he must return my money  
 'and he did so.  
 'Yesterday this selfsame person  
 'again stole Kx'ao's goat  
 'and killed it and ate it.'

Snyman 1970: 119]

### TAA.

Here it will simply and briefly be noted that, for the *reciprocal* implication in !Xóǝ, Traill recorded (1994: 117) the regular use of *llqháẽ* 'self'. It seems notable that Nama has an adjective *llae-tsi* (with a synonym, *ama*), which may be used to impart a sense of 'true, real, genuine' (Haacke and Eiseb (2002: 8, 229). It seems worth further mentioning, in view of earlier comments, that *ll'áe* in Khwe means 'owner, master' - just as does *ll'āẽ*, *ll'āĩ* in !Xóǝ. (It is possible, however, given the closeness of the Khwe and !Xóǝ forms, that borrowing accounts for at least some of these distributions.)

## !UI.

As concerns the *reflexive* implication in !UI, it most commonly seems to be expressed by means of an ordinary pronoun. (For example, Maingard noted (1937) in connection with #Khomani that: ‘the personal pronoun is merely repeated, e.g. *na |nʰe ŋ* ‘I see me’.)

As far as presence of a grammaticalized *reciprocal* construction is concerned, the evidence is not altogether consistent. Maingard (1937) reported for #Khomani the use of !*koi* following the object pronoun, glossing it ‘this’. His material included the following examples:

(40) Ca #kami i !koi

Ca	#kam-i	i	!ko-i
PRO1 <sup>st</sup> plExcl	strike-?	?	RECIP-?

‘We beat each other’ [Maingard 1937]

(41) Ca |kxʔa i !koi

Ca	kxʔa	i	!ko-i
PRO1 <sup>st</sup> plExcl	shoot	?	RECIP-?

‘We kill each other.’ [Maingard 1937]

(It will be recalled that Ju|’hoan expresses a reciprocal by means of a *verbal extension*, *-khòè*.)

In |Xam, however, the indication of a reciprocal relation more often seems to be associated with the use of an expression *|kã-gɛn*, which seems to have a meaning ‘same, like’ at its heart, though it was glossed by Dorothea Bleek (1956) as a plural *noun* meaning ‘women, females, companions, mates’. In the example, below, it is indeed used almost substantively, with the second instance of the pronoun being interpretable as possessive:

(42) Hĩ |ku !hauẽ hĩ |kãgɛn

Hĩ	ku	!hau-ẽ	hĩ	kã-gɛn
PRO3 <sup>rd</sup> Ipl	TA	visit-?	PRO3 <sup>rd</sup> Ipl	same-?

‘They visit their like.’ [< ‘one another’]

[*Specimens*: 300-1]

The following example, however, seems to express a more clearly regularized reciprocal construction:

(43) |hú|hú há |ne !kwe!kwella hi |ká-gɛn

hú hú	há	ne	!kwe-!kwe-lla	hi	ká-gɛn
Baboons	Past	TA	look[redup]-GO	PRO3 <sup>rd</sup> Ipl	same-?

‘The baboons looked at one another’

[*Specimens*: 27]

This morpheme would seem to be a plausible contender for cognacy with the JU |ʔàè discussed above. Nonetheless, the picture in [Xam is complicated by the presence of *two* morphemes that both suggest themselves as potential affines for the reflexive and other inter-related morphemes seen in SAK languages. The following items may be mentioned:

**Fig.V.11.** Morphemes across the SAK languages with implications pertaining to identity or sole participation.

gloss, function	KHOEKHOE	KALAHARI	JU	TAA	!UI
‘self, selfsame’	llkhā				ká (?)
‘owner, master’		ll’áe		ll’āě	
‘true’	llae-tsi, ama				
body			ámá		
REFL	*-sani [verb ext]	*-sani	’àè		
RECIP				llqháě	ká
‘do.of.self’					llě (? < llani)

*Specifying a sole or comprehensive role.*

The additional morpheme shown at the bottom of the column for |Xam seems to express a familiar subset of the often overlapped implications described above, but more particularly indicates that an action or process is self-instigated by the *principal (and sole) role-player*. The |Xam expression llě was glossed as ‘to do oneself’ by Dorothea Bleek (who added that, in combination with a following noun, it could also mean ‘one’s own’). The example below was provided by her, but is requoted from the original text:

(44) !kʔwa: llgaitən llě hiŋ ui

!kʔwa:	llgai-tən	llě	hi-ŋ	u-i
hartebeest	shoulder-?	V.of.self	PRO3 <sup>rd</sup> !Isg-?	arise-?

‘The hartebeest’s shoulder arose by itself.’

[Specimens: 2-3 ]

It will be recalled that a similar role may be played in Jul'hoan by the reflexive morpheme |'àè; while in Kalahari Khwe, as exemplified by Khwe, it is the reflexive *verbal* extension-*can* (~-*cen*) (< PK \*-sani) that fulfils the same function. For the present, it is simply noted that the use of such morphemes may ultimately be better interpreted in the context of an ergative system. In the case of the |Xam examples, the function of llě (? < llani) appears to be to cancel the possibility of any incongruous implication of volition or imposed action, on the part of the inanimate 'shoulder'. This aspect of the syntax of !UI (and other Khoesan languages) cannot be explored further here, but is the subject of planned future investigation.

Implications of a *sole* or *comprehensive role* are commonly expressed in Bantu languages by means of a quantitative pronominal stem with exclusive implication. (One of these forms was tentatively reconstructed by Meeussen (1967) as PB \*-nka 'alone', but it is not certain that the diverse forms found in Bantu languages of the southern region are always direct reflexes of this particular root. Tswana has a possible outcome in the quantitative stem -*si* 'only, alone', but there is no active equivalent left in Sotho (Doke and M (p. 116), while Kgalagadi and Tswana use the enumerative -(*n*)*gwe* 'one'. The Nguni languages generally reserve their enumerative stem -*nye* to express an indefinite 'one, some' – while introducing -*dwa* (? < PB \*-twa 'finish' or \*-twa 'alone, empty, vain') for the exclusive implication.)

The overall complexity of the picture is deepened by the possibility that the exclusiveness of the referent's role may be indicated by expressions which are (in formal terms) modifiers of the verb rather than the noun, and hence are adverbial. (Cf. 'He did it alone' versus 'Only he did it'.) In addition, a sole or comprehensive role may sometimes be conveyed by the same morphology used to express co-identity.

In Namibian Khoekhoe, there is a small and heterogeneous set of morphemes which may be considered to supply implications of this general kind, although, insofar as they are used post-nominally, they do not seem to conform to the standard pattern of specifiers in the head-final KHOE languages. In a few cases they even appear to be fully adverbial. (It is for this reason that they have been dubbed 'modifiers' for purposes of this discussion.) They include the following, where the meanings are those supplied by Haacke and Eiseb (2002):

**Fig.V.12.** Morphemes in Namibian Khoekhoe with implications of sole participation.

<i>#hani</i>	‘self, only, alone; precise, exact, the very’
<i>#û (#unu)</i>	‘my-/your-/him-/her-/itself, our-/your-/themselves; exactly’
<i>aitsama</i>	‘-self, in person, personally’

The bare glosses on their own do not quite make it clear whether the morphemes in question indicate a co-referentiality, or sole involvement of a referent in a particular process or circumstance. However, *#hani* seems to code an exclusive or sole role (as in ‘We did it all by ourselves, on our very own, alone’). This word is labelled an adjective by Haacke and Eiseb (2002), who mention that it is now rare, having been superseded by *#u(nu)*. (The slight resemblance of *#hani* to the |Xam *ll̃* (? < *llani*) mentioned above can only be noted.)

Of *#û (#unu)*, Haacke and Eiseb note (2002: 383) that it is used in apposition, as in:

(45) *Sa*-ts *#û*-ts go *đi*.

Sa-ts	<i>#û</i> -ts	go	<i>đi</i> .
PROIncl-2 <sup>nd</sup> msg	SELF-2 <sup>nd</sup> msg	Past	do

‘You yourself did it. [Don’t accuse others.]

[Haacke and Eiseb 2002: 383]

This example illustrates the potential for overlapping with the indication of co-referentiality. Although the Khoekhoegowab expression is translated here by means of the reflexive in English, the actual implication seems to be closer to that of an ‘emphatic reflexive’, and the phrase ‘You did it - your very own self’ - might alternatively be glossed ‘You alone did it’. (Haacke and Eiseb mention also that a derived form *#û #ûsa* can be used as an appositional adjective following the noun, to mean ‘the very, genuine; in person’.)



Meinhof (1930) recorded a post-nominal morpheme !'ũ in !Ora, which he suggested was the counterpart of the Nama #u, giving the following example:

(46) llna llkx'ai-b !'ũ-b

llna llkx'ai-b !'ũ-b  
 DEM time-3<sup>rd</sup>msg SELFSAME-3<sup>rd</sup>msg

'at the very same time'

[Meinhof 1930: 46]

**Note to sentence (46).** In the same paragraph, Meinhof also mentions a !Ora adjective llxa 'the same', which may be used in similar contexts.

If the morpheme #ũ (and possibly !'ũ) may be assumed to have an underlying meaning such as 'alone' or 'sole', then it is not stretching things too far to suggest that it extends into the semantic range of words meaning 'one'. It is possible, therefore, that it is related to the morpheme seen as the base of the Khoekhoegowab ordinal expression #ũro 'first' (notwithstanding the difference in the click accompaniment). Finally, it would also seem to be relatable to the morpheme #ũ-ã, used in !Xóõ to express both 'one' and 'alone'.

*Specifying uniqueness of an intended referent.*

It was noted at the start of this sub-section that the essential equivalence of some of the cross-SAK items may not become apparent until they have been given a characterization in terms of their function (or underlying meaning) rather than their formal status. An example of this, concerning Khoesan expressions for 'one', is given next.

Ju |'hoan, as described by Snyman (c. 1975; 1970) has:

- \* an enumerative -n|è'e 'one, single', in compounds, e.g. žu-n|è'e 'one person'
- \* an indefinite quantifier -n|ui, 'one, a certain, next', in compounds, e.g. žu-n|ui 'someone'

\* a ‘co-identificational’ specifier |’àè [ |’e] ‘self, selfsame’

All three items pattern as ‘true descriptives’, in the sense that they do not require the nouns they qualify to be suffixed in ‘relative –à’. (This fact might be taken to confirm that at least these non-Khoe specifiers do *not* have a verbal origin; but it might equally point simply to their fully grammaticalized status.)

The question of potential affines for these terms is not a little complicated by the presence in KHOE of an indefinite morpheme, such as the Nama *ɲi* (and PKal \*ɲĩ) ‘some’ which seems to be the *logical* counterpart of Ju|’hoan’s indefinite *n|ui*. However, the enumerative ‘one’ in KHOE is reconstructed as \*|ui for Proto-Kalahari and Proto-Khoe as a whole, and it seems a strong possibility that this is the true *morphological* affine for Ju|’hoan’s *n|ui*. It has already been suggested, furthermore, that KHOE *demonstratives* of the kind arising from PK \*|e (> PKK \*ne; PKal \*ɲé) ‘this’ are possibly affines of the JU |’àè [ |’e] ‘self, selfsame’.

In these terms, the following sets could be proposed:

**Fig.V.13.** Preliminary set of possible KHOE-JU matches for some words meaning ‘one’.

	KHOE	JU	
one	PK, PKAl * ui	<i>n ui</i>	one (indef.)
one (indef.)	PKal *ɲĩ	<i>n è’e</i>	one
this here (def.)	PK * e, PKK *ne, PKal *ɲé)	’àè [  ’e]	selfsame

### V.5. Conclusion.

The discussion in the preceding sections has provided the background motivation for the sets of potential affines presented in the Main Tables for this chapter. These series suggest the existence

of cross-SAK similarities both ‘horizontally’, i.e. across the possible syntagmatic sequence of demonstrative, quantifying and descriptive specifiers, as well as ‘vertically’, i.e. within each paradigmatic set of category options. Items placed in parentheses are uncertain members of a series - either because they seem to be fairly transparent loans, or else because it is not entirely clear (from a phonetic or semantic point of view) that they can be legitimately proposed as part of a particular sequence. (It is not denied that one or two of the proposed series may in the end prove untenable. It will only be possible to detect these after the establishment of correspondence regularities.)

The fact that the first two categories of specifiers are intrinsically closed sets, while the set of descriptive (i.e. qualitative) specifiers has been constrained by a number of conditions (as previously outlined) makes these cross-SAK resemblances all the more telling. Lastly, it seems notable that there appears to be a near ‘full-house’ of candidate cross-SAK affines for the exhaustive list of colour terms. The semantic fields covered by the descriptive specifiers are set out below.

**Fig.V.14.** List of semantic themes for which comparative series of descriptive specifiers are presented.

Theme	Related meanings	PK	PK gloss
BIG	big, adult, full-grown, great, fat, thick, wide, far, far, tall, long, high, deep	PK *kai	big
		PK(K) *!u, PKal *!nu	far
		PKK *gaxu	(be) long
		PKal *!ao	(be) long
SOFT	soft, yielding, spongy, light, easy	PK(K), Pkal *tham	soft
		PK, PKK, Pkal *subu	light, easy
HARD	hard, onerous, difficult, strong, stout	PK, PKal *!adi	hard
SMALL	little, short, young, new, weak, new, fresh, ‘green’, thin, narrow, sharp	PKal *!lom	short
		PKK * a	small
		PKal *kx <sup>?</sup> oa	new
		PK, Kal *ts <sup>?</sup> ai, PKK * x <sup>?</sup> ai	sharp
DARK	black, bec. dark, evening night, [cold, cool, shade]	PK *ɤNu, PKK *ɤu, PKal *ɤnu	black
		PKAL *thu	night
HOT	hot, warm, fire, dry, shrivelled	PK, PKK *  <sup>?</sup> ai	fire
		PKal *  <sup>?</sup> o, *  xo	(be) dry

SICK	sick, tired	PKal *#i	(be) sick
		PKal *tsa	(be) sick
DEAD	die	(PK(K), PKal *  ʔo	die
SOUR	sour, bitter, salty	PK, PKal *tsadu	sour
		PK, PKal *kxʔau	bitter
		PKK * ʔu	salt (n.)
PLEASING	good, right, sweet, pleasant, beautiful, becoming, seemly, clean, pure, holy, smooth, polished, straight, orderly, neat	*!āi	good, right
		PKal *tʔon(i)	good, beautiful
		PK *kxʔanu (v)	be suitable, becoming
SUITE OF COLOUR TERMS	white,	PKal *!ʔu	white
	white, cream	*xóé [PKalK] [Bantu?]	white
	young, fresh, 'green'		
	pale yellow, green, blue (‘vaal’)		
	egg-yellow, cream		
	yellow		
	orange, yellow, brown		
	colour term - blue, green		
	dark, dusky		
	dark brown, black		
	red-brown		
	red		
	roan, chestnut, blue-grey, mauve	* noa [PKalK; PWK]	red, brown

## NOTES.

1. The indefinite sense of ‘one’ easily shades into meanings such as ‘some’, or ‘other’, and Bantu enumeratives such as the Nguni *-nye* or Sotho-Tswana *-ngwe* are often used in this sense, as in the Xhosa proverb, *Intaka yakha ngoboya bezinye* ‘A bird builds with the feathers of others’ (i.e. ‘No man is an island’). However, in some of the south-western Bantu languages, it seems that equivalent enumeratives such as *-mue* (or *-mwe*) ‘one’ in Kwanyama, are more commonly taken to imply ‘another (different)’, or as Tobias and Turvey explain (1954: 128), ‘persons unknown or new to the speaker or hearer’. The sense of ‘another (different)’ is conveyed in Zulu by the enumerative stem *-mbe*. In several of the south-western languages, when it is intended to express ‘other (same)’, i.e. in reference to ‘persons already known to the speaker or hearer’, the

pronominal stem used is *-kuao* (or *-kwao*). In Ndonga, which also has the enumerative stem *-mwe* for ‘one’, the two senses of ‘other’ are expressed by *-lwe* and *-kwao*. (It is not impossible that this *-lwe* (recorded in Herero by Brincker as *-arue*) is directly cognate with the Nguni *-nye*, and that both descend from some other root than either *-mwe* or *-ngwe*.) The sense of ‘another (different)’ is conveyed in Zulu by the enumerative stem *-mbe* (which may well be the true counterpart of Kwanyama *-mwe*). In Tswana, the counterpart of *-mbe* is probably the enumerative *-pê*, which Cole noted (1975: 151) tends to be translated much like *-ngwe* as ‘another, other’. Cole preferred to gloss it as ‘any, some’, and commented that since it is almost always used in negative sentences – with meanings such as ‘not .. any’, the enumerative *pê* itself is often interpreted as a negative particle. The same stem is used as the base of an adverbial expression, *gapê* ‘again’.

2. Concerning a range of Kwa languages, for example, Awoyale (1986) discusses the use of such an element in the absolute reflexive, the reciprocal, an emphatic reflexive (e.g. ‘I myself’), and a ‘genitival reflexive’ (e.g. ‘my own’). The following table represents an extract from some of this data, illustrating the absolute reflexive only. In each case, the element translatable as ‘body’ is followed by the appropriate possessive pronoun:

Figure illustrating the use of a morpheme meaning ‘body’ to express an ‘absolute reflexive in selected Kwa languages, after Awoyale (1986).

a. YORUBA. (*ara* = ‘body’)

‘myself’	<i>ara mi</i>	‘our-selves’	<i>ara wa</i>
‘yourself’	<i>ara re</i>	‘your-selves’	<i>ara yin</i>
‘it/him/herself’	<i>ara re</i>	‘them-selves’	<i>ara won</i>

b. IGBO. (*ònwε* = ‘body’)

‘myself’	<i>ònwε mụ</i>	‘our-selves’	<i>ònwε anyī</i>
‘yourself’	<i>ònwε gi</i>	‘your-selves’	<i>ònwε únu</i>
‘it/him/herself’	<i>ònwε ya</i>	‘them-selves’	<i>ònwε ha</i>

c. URHOBO. (*òmà* = ‘body’)

‘myself’	òmà mé	‘our-selves’	òmà ré avwāē
‘yourself’	òmà wé	‘your-selves’	òmà ré owāvwā
‘it/him/ herself’	òmà ré òṅē	‘them-selves’	òmà ré aṅē

d. BASSA-NGE. (*ními* = ‘body’)

‘myself’	ními m̄	‘our-selves’	ními ì
‘yourself’	ními ò	‘your-selves’	ními è
‘it/him/ herself’	ními ù	‘them-selves’	ními à

### Conclusion to the overall section on cross-SAK structural affinities.

The assembled affinities in the two chapters of this section suggest, firstly, a likely unity of the JU and !UI-TAA languages. The grounds for this working hypothesis are: an apparently common repertoire of similar basic grammatical morphemes, verb extensions, and verbs used with a grammatical function in multi-verb constructions (throughout each category of typical use for such constructions, such as the expression of modality, tense and aspect; or the expression of locative existential and directional locative implications). The same unity is suggested by similarities in the inventories of morphemes used with the various functions of specifiers. Evidence of correspondence patterns across these groups - already suggestive of this unity - has previously been provided by Honken (1998), as discussed in an earlier chapter. Secondly, on consideration of the same factors listed above, the impression of a probable unity involving the JU and !UI-TAA languages extends to inclusion of the KHOE languages in a likely scenario of overall unity for the SAK languages.

Stage I therefore concludes with the adoption, as a *working* hypothesis, of the likelihood of SAK unity. The remaining parts of this work - in Stage II - will attempt to provide corroborative evidence for this hypothesis.

MAIN TABLES FOR CHAPTER V.

Main Table [V]1. Cross-SAK specifiers of a **deictic** nature, plus terms that may be used to clarify aspects of particularity and identity (as discussed in the text).

	KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI	!UI
gloss	PK: PKK	Nama, Dama, +, !Ora	Naro, Khwe	Hie-Chware 'C1'	PKalK; PWK, PEK	Ju  'hoan, Central & Northern !Xūŋ	!Xóō	Xam,   D!ke, #Uŋkwe	#Khomani
that	*lla [PK]: *lla [PKK]	llnā [N]; llna [!Ora]	nlla [Naro-Ba]; nllāā [khwe]		*llna [PKalK]		á'n ~  é'ě 'there' [!Xóō],	llna [ Xam], llna [  D-!ke]	llja [Kho-M]
this, that	* e [PK]: *ne [PKK]	nē [N]; [hē] [!Ora]	nēē [Nar-Vi]; n é-e, n ī [Khwe]		* né [PKalK]	'àè [ 'e]	? ( ī 'be at' [!Xóō])	ke [Xam], ?(llne-a [llŋ !ke])	
same		llkhā [N]; llxa [!Ora]	llxa- 'another (same)'				? ( gāhn'n [!Xóō])	ka- [ Xam]	
-self, real, true, own		ll'āé-tsī [ laetsi] [N] 'true'	llx'ae 'self' [Nar- Ba]			'āè 'self' [ <i>reflex</i> ] [ Jul'hoan, Di]	llqhāē '-self' (recip.) [!Xóō]	? (llē, llēi, llī [Xam])	
owner			ll'āé [Khwe]				ll'āē, ll'āī	? (llē [Xam])	
self, (body?)		ai-tsama				ámá	'Onāhā		

**Main Table [V]2.** Cross-SAK specifiers of a **quantifying** nature (as discussed in the text).

	KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI	!UI
gloss	PK: PKK	Nama, Dama, +; !Ora	Naro; Khwe	Hie-Chware	PKaIK; PWK, PEK	Ju !'hoan, Central & Northern !Xũŋ	!Xóð	[Xam, !D!ke, #Uŋkwe	#Khomani
one	*!ui [PK]	!úí [ !gui] [Nama]; !ui [!Ora]	!úí [Nar-Vi]; !úí [Khwe]		*!ui [PKaIK]	n!úí	-		
alone, one, sole		#?úúŋ [ #ú] (#unu) 'selfsame' #uuro [ #gũro] 'first' [N]					#?ú-ã [!Xóð], #ũ-u [ !'Auo]		
some (indef.) one		!ní [N]; !ni [!Ora]	!ʔé [Nar-Ba]		*!ní [PKaIK]	n!e'e [n!éé]	-	? (ʔie-tn 'einige' [ #Uŋ])	
one, each, every one			? (úé, wé(ã) [Nar-Ba])				!oé [S6], !kwʔe [S5]	? (!kwa:i [ [Xam]) !kwe [S2], ʔoe [ #Uŋ],	!lkoe [ #Kho-M]
all, the whole of		!hoa [N]; !hora-ka [!Ora]	kó(-á)-ká-(x)a [Khwe]			hũ-šè [!Xũŋ- N]	kōo kã'ã [!Xóð]	ku: [ [Xam]	
many, much, great	*!kai [PK]	!kái [Nama]; !Kai [!Ora]	!kái [Nar-Ba], !kai-sá [Nar-Vi]			!hai [Ju!'hoan], !hai, #hi [!Xũŋ-C]	!xai [S6], !xai [S5]	!kwai-ya [ [Xam], !nai, !nei [!ŋ!ke] !nain [ #Uŋ]	
much, all, great				kari-si [C1]			!láli >[!lát:i] [!Xóð], !lkari [S5]	!kerri, !ké-!ke- ttŋ [pI] [ [Xam], !atē [ #Uŋ]	



**Main Table [V]3.** Cross-SAK specifiers of a **descriptive** nature.

	KHOE	Khoekhoe	W Kalahari	E Kalahari		JU	TAA	!UI
gloss	PK: PKK	Nama, Dama, +; !Ora	Naro, Khwe	Hie-Chware	PKalK; PwK, PEK	Ju  'hoan, Central & Northern !Xūŋ	!Xóǒ	[Xam, !D!ke, #Uŋkwe
<b>BIG</b>								
many, much, great	*kai [PK]	kái [Nama]; kai [!Ora]	kái [Nar-Ba]; kai-sá [Nar-Vi]			#hai [Jul'hoan], #hai, #hi [!Xūŋ-C]	!xai [S6], !xai [S5]	[kwai-ya [ [Xam], !nai, !nei [!ŋ!ke] !nain [#Uŋ]
big		#ǔi [#gui] [N] 'many'						!kui:ja [ [Xam], ? (!go: [ !D!ke])
fat		!lui-sa [Nama]	!lūū 'be big, of thgs, animals' [Khwe]; n!lǔú, !l'úú 'be fat' of persons' [Khwe]					!lku-wa [ [Xam], !lk'wi:ja [ !D!ke]
great, big			#nǎbè [Nar-Vi]			n!ǎ'a [Jul'hoan], !na:a 'fat' [N1] n!ǎ'a, n!ǎ'à [!Xūŋ-C], n!ǎ'a [!Xūŋ-N]	'!lnǎhǎ 'be fat' [!Xóǒ]	
thick		!nau, !lau [Nama]	tsáú [Nar-Vi],	#khau 'large' [C1]				!lks'au [#Uŋ]
fat, broad		kau-sa [Nama]	ʔǎu [C2]; cáǒ 'be broad' [Khwe]			tšǎng, šǎng [Jul'hoan], tšǎng [!Xūŋ-C], tšǎng [!Xūŋ-N]	tshào 'long' ( 'broad' HH) [!Xóǒ]	

gloss	PK: PKK	Nama, Dama, +; !Ora	Naro; Khwe	Hie-Chware	PKalK; PwK, PEK	Ju 'hoan, Central & Northern !Xũŋ	!Xóð	Xam, !D!ke, #Uŋkwe
long, tall, high		!nao-sa [Nama]	!áo [Nar-Vi]; kyáo [Khwe]		*!ao '(be) long' [PKalK]	hau [N3]; fáo [!Xũŋ]-HH	tsháo 'long' ( 'broad' HH) [!Xóð]	
long, tall, far, high, deep	*gaxu '(be) long' [PKK]	ga(i)xu [Dama]; gaxu [!Ora]				g#ã'i 'height, distance' [Jul'hoan], g#ãŋ'ng 'height, distance' [!Xũŋ-C], n!á'i [!Xũŋ-N]	? (llqái 'be far away' [!Xóð])	
long, far						#xã 'far, distant' [Sn], #xana 'long' [N3]	? (llqái 'be far away' [!Xóð])	a: [ !D!ke]
far	*!u [PK: PKK]	!nú [Nama]; !nu, !nu-sa [!Ora]	!núú [Nar-Vi]; ngúú [Khwe]		*!nu [PKalK]			
long, tall, deep							Góna 'long, tall, deep' [!Xóð],  nu:a [ !'Auo]	!xo: 'tall' [S1], !xo:wa 'long, tall' [S2]
<b>SOFT</b>								
soft, yielding, spongy	*tham [PK: PKK]	tsam(-ra) [Nama]	tham-ka, nam-nam [Nar-Vi]; thám [Khwe]		*tham [PKalK]	#ama [N2]		
soft			tcãã [Khwe]			tx'ã 'soft', tx'am 'soak, bec. soft' [Sn]		t'ai:n 'soft' [S1]
easy, soft, light	*subu [PK: PKK]	suwu	tʃu 'light' [C2]		*subu [PKalK]	fo [N1], fwi 'light' [N2]	tôh'm, dtshô'm, [!Xóð]	

gloss	PK: PKK	Nama, Dama, +; !Ora	Naro, Khwe	Hie-Chware	PKalK; PWK, PEK	Ju  'hoan, Central & Northern !Xūŋ	!Xóǒ	Xam, IID!ke, #Uŋkwe
light		lluwu, llhopu 'fragile' [Nama]	cùvùú [Khwe]	khoboi [C1]			llòh'm (kâ) [!Xóǒ]	
<b>HARD</b>								
hard, strong	*!adi [PK]	!ári [!gari] [N]	g#eri [Nar-Ba], !ari-xa [Nar-Vi]	karié [C1]	*!adi [PKalK]	!àn'ng [!Xūŋ-N]		uerri-ya [  Xam]
hard, strong, stout		ǎi-sǎ [  gai- sa] [Nama];  ai,  'ai-sa [!Ora]	!x'ai-!x'ai [Nar-Vi]			kx'ai 'be brave' [Sn]		_!nai [S2]
<b>SMALL</b>								
short		!nuwu [Nama]; #?ubu, !nubu [!Ora]	llòm [Nar-Vi]; llóm [Khwe]		*llom [PKalK]	!òmá [Sn]		
little, small, young	* a [PKK]	?áá [ ā] [Nama] 'new, young'	kai 'thin' [Nar-Ba]			kā'i 'young, green, small' [Sn]		t'aiŋ [S1]
young, fresh, 'green' cf. COLOURS			tsai [Nar-Vi], haini [C2]; llhāi [Khwe]	llgai-tfu [C1]		hāi 'young, green, small' [Sn]	dzái, [!Xóǒ]	kain-ya [  Xam],
new, young		'á-sǎ [asa] [Nama];  'ā-sa [!Ora]				x'āa- x'ána 'thin' [Sn]	qhāā (kV) [!Xóǒ]	llka:ŋ [  Xam]
new, young, weak			nǒe [Nar-Vi]	?(dwee [C1])		zé, zàqí [D], dze [!Xūŋ-C], dže [!Xūŋ-N]	qhéē (kê) 'fresh, raw' [!Xóǒ]	#ē [S2]

gloss	PK: PKK	Nama, Dama, +; !Ora	Naro, Khwe	Hie-Chware	PKaK; PWK, PEK	Ju  'hoan, Central & Northern !Xūŋ	!Xóō	[Xam, IID!ke, #Uŋkwe
young, green, immature		#kham [Nama];  xam ~#xam [!Ora]					#kaba [S6]	
new, young			oa [Nar-Vi] ; kx'óa [Khwe], - x'óa [Khwe]		*kx'oa [PKaK]		Opwa-i [  'Auo]	-Opwa
small, narrow, thin		#kharí [Nama]	xáré 'thin' [Nar-Ba]  x'áré [Nar-Vi]			ts'è-má [Ju 'hoan], ts'è-má, tš'è-má [!Xūŋ-C], ts'è-má, tš'è-má, ts'èrè-má [!Xūŋ-N]		#èri, ts'ere, #eni [S1], #enni [ [Xam],  kxre, [S2]
thin, narrow, long		'úi [  uí] [Nama];  'úi [!Ora]				u'í [Sn]	'úi [sg],  q'án-tá [pl] [!Xóō]	wiri [S1]
sharp	PK, Kal *ts'ai, PKK * x'ai	'áá [  ā][Nama];  kx'a- kx'a [!Ora]	ts'ée [Nar-Vi], t'e'ÉÉ [Khwe]				si'i [!Xóō]	'tsi: [S1]
thin, hollow, lean		#āwá-sa [ #gaba] [Nama]	gllaba [Nar-Ba]			žam [Sn]	#'āba [sg], #'āō [pl], dzāba-tá [!Xóō]	
weak		#khawu-sa [N]	k'am-ka [Nar-Ba], !ābu [Nar-Vi]			g#am 'scrawny' [Sn]		

gloss	PK: PKK	Nama, Dama, +; !Ora	Naro; Khwe	Hie-Chware	PKaIK; PwK, PEK	Ju 'hoan, Central & Northern !Xūŋ	!Xóð	Xam, !lD!ke, #Uŋkwe
<b>DARK</b>								
night		tsuxu-b [Nama]	thùù-xu [Nar-Vi]; thùú [Khwe]		*thu [PKaIK]			
dark, night			#núú [Nar-Vi]; n#gú(-kyao 'be dark' [Khwe])	dʒunje 'dark' [C1]		ʒo: [N1]	njé 'night' [!Xóð]	? ( ho [S1]), ? (lkoè [S2])
black, also COLOUR	*#Nu [PK]: *#u [PKK]	#nū [Nama+]; #nu~!nu [!Ora]	n#úú [Nar-Vi]; n#gú [Khwe]		*#nu [PKaIK]	žo, džo [Ju 'hoan], džo [!Xūŋ-C], džo [!Xūŋ-N]		
dark		'howo 'bec. dark' [Nama]	? ( gùú lòm [Nar- Vi]),  nu:ba [C2]			? ( gu: [N1])	tòhð 'be dark' [!Xóð]	
bec. dark, late		!khae 'bec. dark' [Nama]	gái 'black' (rare) [Nar-Ba], _gai [C2]; #gii, #x'i [Khwe]	haie [C1]		g#x'a, #x'a, #āu ll'āe [Ju 'hoan], (g)#x'a(ā) [!Xūŋ- C], #x'a [!Xūŋ-N]	qāhe 'dusk', dt'kx'ái 'dark' [!Xóð]	llga: 'night' [S1,2], llā 'night' [#Uŋ]
[cold, cool, shade]		!khai [Nama]; !xai [!Ora-E]	#xi, #kxé [Nar-Ba], !xai [Nar-Vi], ngyéi 'be cool' [Khwe]			#e'u [Sn]		llkhāi 'shade' [ !lD!ke]
<b>HOT</b>								
fire [n.]	* ʔai [PK: PKK]	ʔǎ- [  ae-s]	ʔee [Nar-Vi];  ʔé [Khwe]			dà'a [Ju 'hoan], dà'a [!Xūŋ-C], dà'a [!Xūŋ-N]	ʔāā [!Xóð],  i [  'Auo]	i [S1,2],  i [#Uŋ]

gloss	PK: PKK	Nama, Dama, +; !Ora	Naro; Khwe	Hie-Chware	PKalK; PWK, PEK	Ju  'hoan, Central & Northern !Xũŋ	!Xóð	[Xam, !D!ke, #Uŋkwe
hot, warm			ʔee [Nar-Vi]; tcãã [Khwe]	#kee [C1]				(tã)  i [S1]; llã [!Uŋ]
fire [n.]		#hubi-b [Nama]					g#qhũm 'without flames' [!Xóð]	
hot, warm		#kx'ummi [!Ora]				khui [Ju]'hoan], khui [!Xũŋ-C], khui [!Xũŋ-N]	kũbi [!Xóð]	
hot		llkhôa-sa [Nama]	llxóá 'of food' [Nar-Vi]				gòhba [!Xóð]	? (llko: nɔ: [S2])
dry, hard, withered		? (khuru [N]); !o [!Ora]	ʔóò [Nar-Vi]	!ko [C1]	*!ʔo, *!llo [PKalK]		Ō'òo 'dry out' [!Xóð]	? (k'ɔro-kn [S1]), k'o: [S2]
dry			llxó [Khwe]				llǰa 'dry out' [!Xóð] llk''om 'dry' [!Auo]	llkó-kɛn, llkō-wa [Xam]
<b>SICK</b>								
sick, ill		ʔáé-sèn [!ae(sen)sa] [Nama]; ʔai-(sɛn)-xa [!Ora]	#ii [Nar-Vi]	tʃii [C1]	*#i [PKalK]	[x'æ 'illness' Ju]'hoan], [x'æ [!Xũŋ-C], #ii 'illness' [!Xũŋ-N]	llkai [S5]	
sick, ill			tsáa [Nar-Vi]; tcáa [Khwe]		*tsa [PKalK]	tʃã [N1]		taŋ [S1], taŋ [S2]

gloss	PK: PKK	Nama, Dama, +, !Ora	Naro; Khwe	Hie-Chware	PKalK; PwK, PEK	Ju  'hoan, Central & Northern !Xūŋ	!Xóǿ	[Xam, !D!ke, #Uŋkwe
be sick, tired		[khûi 'bec.sick' [Nama]	llk'uiã [Nar-Ba], llk'wiã [C2]			llkwĩ [N1], kwi [N2]	úni-ni 'illness' [!Xóǿ]	[ku: [S1]
<b>DEAD</b>								
dead	*!ʔo ('die') [PK: PKK]	!ʔóǿ hààn [!ǿ há] [Nama]	llóá [Nar-Ba], !ʔóó [Nar-Vi]		*!ʔo ('die') [PKalK]		ʔnǿǿ 'die, euph.' [!Xóǿ]	[kū-ka [ [Xam]
<b>SOUR</b>								
sour	*tsadu [PK]		tsau 'sour, salty' [Nar-Vi]; tcéru [Khwe]		*tsadu [PKalK]		tá'u (ká) 'bitter' [!Xóǿ]	
bitter	*kxʔau [PK]	ʔau [Nama]	kx'au [Nar-Vi]; kx'éú [Khwe]		*kxʔau [PKalK]		qá'u 'salty' [!Xóǿ]	llk'ao-wa [S1]
bitter			xáná [Nar-Vi]				qá'na 'salt' [!Xóǿ]	llxāra ? [ [Xam]
salt(y)	*!ʔu [PKK] ( 'salt')	#ʔòǿ-xǎ [#ǿ- xa] [Nama]; [ʔū-]ʔū-sa, #kx'o-xa-sa [!Ora]				n#ʔi 'salty' [Jul'hoan]	!nob 'salt' [S6]	ʔko: 'salt' [S1]
<b>PLEASING</b>								
good, right	*!āi [PK: PKK]	!áin [!gāi] [Nama]; !āi [!Ora]	!āi [Nar-Ba], kyāi [Khwe], kxǎè- kxǎè [Nar- Vi]		*!āi PKalK	!āisi [Sn], kāi, kīi [!Xūŋ-C], kāi [!Xūŋ-N]	qái [!Xóǿ], #kái [ 'Auo]	ʔwai:i [S1]

gloss	PK: PKK	Nama, Dama, +; !Ora	Naro, Khwe	Hie-Chware	PKaK; PWK, PEK	Ju  'hoan, Central & Northern !Xūŋ	!Xóǿ	Xam, !D!ke, #Uŋkwe
sweet, nice, good, beautiful			t'úě [Nar-Ba]  ǿó [Nar-Vi]; t'ón [Khwe]		*t'on(i) [PKaK]	'hom [Ju 'hoan], t'ǿi [N1], 'hom [!Xūŋ-C], 'hom [!Xūŋ-N]	qhǿh'ǿ 'sweet, pleasant', Ǿkx'úm 'deliciousness' [!Xóǿ]	
smooth, even, clean						#xānū 'polish, smoothe' [Sn]	#qān (kā) [!Xóǿ]	!kAn [S1]
clean, pure, holy		!ʔānū [!anu] [N]; !ʔanu [!Ora]	!ʔano [Nar-Vi]; nllāū-ci [Khwe]			gǧ'u [Sn]		
be fitting, suitable	*kxʔanu [PK]	anu [Nama]; kxʔanu [!Ora]	kxʔano [Adv] [Nar]; kxʔanu [Khwe]			lláú [adv]	(#ʔāū kú 'be sufficent')	llkūŋ [  Xam]
straight, well-ordered		#hanu [Nama]; #hanu [!Ora]	#hāno, kxʔáo [Nar-Vi], #hoáná(-can) [Khwe]			ján (Di), ža'o, dža'o [Ju 'hoan], dža'o [!Xūŋ-C], dža'o [!Xūŋ-N]	(#qhǿna kV 'straighten' [!Xóǿ] )	
<b>COLOURS</b>								
white			xǿe-xǿe-se [adj] [Nar]	hwehe	*xóé [PKaK]	jeū [Sn]		
white, cream		!ʔūri [!uri] [N]; (xati (!Ora E))	!ʔúú !ʔó, !ú, !ó [Nar-Ba], !ʔúú [Nar-Vi]		*!ʔu [PKaK]		!núi-sa [n.], [!Xóǿ]	!ui (of horse) [#Un], !kui:ta [S1]



gloss	PK: PKK	Nama, Dama, +; !Ora	Naro; Khwe	Hie-Chware	PKaK; PwK, PEK	Ju  'hoan, Central & Northern !Xũŋ	!Xóð	[Xam, !D!ke, #Uŋkwe
young, fresh, 'green'			llhãĩ [Khwe], tsai [Nar-Vi]	llgai-tju [C1]			dzáĩ, [!Xóð],	[kain-ya [  Xam]
pale yellow, green, blue ( 'vaal' )		l'hãĩ 'young, green' [Nama];  hai ~  nai [!Ora]	tsai [Nar-Vi], tsãá [Nar-Vi], haini [C2]; llhãĩ [Khwe]			hài [vi] 'green, young'; hài 'young, green, small' [Sn]	lgãhi [!Xóð], dzáĩ, [!Xóð]	[kainja 'yellow' [S1]; _kala 'yellow' [S2]; n- hai (of horse) [#Uŋ] [loan?]
egg-yellow, cream			(dám) #ubi			!hùni [Ju]'hoan]	g#qhúi (ká)	
yellow						lãŋ [Sn], lãŋ, tšáo, tšxau [!Xũŋ-N]		
orange, yellow, brown		!nãũ-b 'red ochre'	llxau [Nar-Ba],			gã'u [Ju]'hoan]; #gau (N1)	llgá'u (ká) [!Xóð]	
colour term - blue, green						( auhn [vi])		l'xau 'dark blue' [S2]
dark, dusky		!khãè [adj]	gái (rare) [Nar- Ba], kãè [Nar-Vi] (twilight)			?(g!ã(a) [Ju]'hoan]); g!ã(e) [!Xũŋ-C]; g!ãe [!Xũŋ-N]	dt'kx'ai; qãhe 'dusk'	!kei-ja 'brown' [S1]
dark brown, black		#ãmã [#gama]	#ãmã [Nar]				#á'ŋa (black, dark blue, green)	

gloss	PK: PKK	Nama, Dama, +; !Ora	Naro; Khwe	Hie-Chware	PKalK; PWK, PEK	Ju  'hoan, Central & Northern !Xūŋ	!Xóð	Xam, !D!ke, #Uŋkwe
red-brown		!ʔāwǎ [  apa] (!lgani) [Nama+];  kx'aba [!Ora]	n#àm [Nar]			g!âân 'red' [vi]	!āhŋa	n- kx'aba (of horse) [#Un] [loan?]
red	*!ʔai [PK: PKK], 'fire'	!ʔae-(!ʔawa) [Nama+] [!ae- apa] 'fire-red'		geye			!ʔēē [!Xóð];	(!ki: [S1])
roan, chestnut, blue-grey, mauve [possibly two series]		#hoa 'dapple-grey, of horse' [Nama+];  oa ~ !oa [!Ora]	n!ùà, n!òǎ [Nar- Ba], n!òǎ 'red' [Nar- Vi]		*!noa 'red, brown' [PKalK; PWK]		!nòhba, òhba [!Xóð]	hoa:ka 'black, dark blue' [S1]; n-!oā (of horse) [#Un] [loan?]

**STAGE 11: CORROBORATING THE WORKING HYPOTHESIS.**

University of Cape Town

## CHAPTER VI. Corroborating the working hypothesis of SAK unity.

### Chapter synopsis.

Patterns of repeatedly similar alternations are shown for stem-initial segments across the SAK spectrum. The tabulated patterns are discussed, and various difficulties presented by the data are identified – in particular concerning patterns involving the click ‘accompaniments’.

### VI.1. Introduction.

It was shown in Stage I that there are commonalities of a structural kind - involving the elements of closed or constrainable grammatical sub-systems - sufficiently striking and thoroughgoing to prompt a *working hypothesis* of likely cross-SAK unity:

- i. Chapter IV discussed the common occurrence in Khoe and non-Khoe languages of multi-verb constructions, where repeated cross-SAK resemblances may be seen in the morphology of the verbs most frequently enlisted for grammatical purposes.
- ii. Chapter V showed that the SAK languages display similarities across their specifier systems, with morphological resemblances being visible in the deictic, quantificational and descriptive subsystems.

When these various resemblant grammatical items were presented, they were (of course) not offered as actual ‘cognates’ but only as potentially related items. The comparative series presented in the tables accompanying the present chapter are now offered as the starting point for arguments that there is some evidence of non-random patterns of repeated phonetic correspondences, which may support the preliminary hypothesis of probable relatedness. (It may be noted that a number of the potentially cognate grammatical forms identified in Stage I can now be seen to conform to one or other of these pattern types. Verbs with grammatical functions - as identified in the chapter on multi-verb constructions - are labelled ‘MVC’ in the tables, and specifiers are labelled ‘SPEC’.)

It should be noted from the outset that the patterns identified in the tables focus in the main on stem-*initial* segments, since the probable fusion of suffixed number-indexing

morphology with stem-final segments, particularly in the case of !UI-TAA languages, makes it problematic to analyse much of the stem-final material, given current state of knowledge. Nevertheless, certain minor patterns involving both medial consonants and final vowels are occasionally noted.

It will be conceded that the tabulated patterns involve predominantly only the *positional type* of the clicks appearing in these alternations. In other words, there is a seeming randomness to the alternations when the *fully characterized* clicks (e.g. as voiced, aspirated, or ejected) are taken into consideration. However, the weight of the structural evidence previously brought (Ch. IV and V), combined with the fact that the alternations of positional click type are (a) iterated and (b) do *not* necessarily involve identities, makes it fair to suggest that the items in the comparative series are rather more likely to be inherited than they are to be borrowed. The basic correspondences of positional click type fall into a number of different patterns, and these are discussed individually in Section VI.2 below.

On the issue of matchings that involve only positional click types - but with a seemingly unsystematic range of associated 'accompaniments' - a number of points are in order. These are set out next.

Firstly, the apparently non-systematic nature of the patterns involving *fully elaborated* clicks does not imply that the broad relationships reflected are necessarily spurious. It will be recalled that some of the cross-SAK patterns involving click accompaniments may indeed, as discussed by Honken (1998), have a quality of 'quirkiness'. Honken set out to demonstrate that such seemingly random relationships might nevertheless be explicable, for example by reference to factors such as the well-known association of certain types of aspiration ('delayed aspiration') and glottalization with voiceless nasal airflow. The comparative series shown in the Tables here bear frequent witness to patterns similar to those discussed by Honken, and examples of this are noted at appropriate points in the discussion (Section VI.2).

Secondly, it is a difficulty inherent in the nature of the data available for the SAK languages - since it is so limited - that the number of potential cognates is seldom high. This has the consequence that it is not easy to demonstrate repeated patternings for each of the characterizations possible, for each of the positional click types. In order to circumvent this difficulty, some reliance is placed on the general linguistic principle that segments characterized in a particular way, e.g. as aspirated, will tend to pattern similarly in

correspondences, e.g. with voiceless segments, regardless of their positional type. Put more simply, it is a universal principle that /p<sup>h</sup>/, /t<sup>h</sup>/ and /k<sup>h</sup>/ in one variety will typically pattern uniformly with segments such as /p/, /t/ and /k/ in a related language. On the basis of this principle, Tables are provided ([VI]20-25) to show patterns based specifically on 'accompaniment' types, as found in association with any positional type of click.

These tables (i.e. of patterns involving accompaniment types) are potentially revealing in several ways. They suggest, for one thing, that regularities may be prevented from appearing when the items compared are not exactly equivalent - not only in terms of meaning, but also in 'part of speech' status and grammatical implication. The initial phonetic segment of a deverbative *nominalization*, for example, may not pattern as expected when it is placed in series with the equivalent *verb* in another variety. Similarly, differences with the potential to distort a pattern may arise when a verb with a *transitive* implication is used as the basis for phonetic comparison with a stem that seems semantically similar, yet which is *intransitive*. A further factor to play a role, unexpectedly made visible in these tables, would appear to be the *gender* of nouns, as will be discussed in the notes (VI.2).

The remaining introductory remarks below concern more general theoretical aspects of linguistic comparison. It hardly needs stating that the conditions for true cognacy of items in comparative series do not require that the segments participating in iterated alternations should be identical - whether in terms of place (e.g. as dental, alveolar or velar segments) or feature characterization (e.g. as voiced, aspirated or ejected). The requirement is only that a segment of one particular place, *a*, as characterized by one particular set of features, *b*, should repeatedly appear in alternation with another segment of a particular place, *c*, as characterized by a particular set of features, *d*. (There may also be sub-set series, where one of these terms participates in a different but repeating set of alternations with some other term.)

A further point concerning cognate status is that it can be *diagnosed* on the basis alone that repeated occurrences of the same alternation exist. Recurring patterns of this kind may nevertheless be expressed in addition by means of the formulations sometimes referred to as 'sound shifts'. In this case it is implied that the terms participating in the alternations have been ordered in such a way as to suggest directionality of the changes involved. It should go without saying that such implied shifts need not necessarily be susceptible to mechanical explanation in terms of articulatory or acoustic factors. This is because

statements of ‘sound shifts’ are abstract formulae, and may obscure the reality that the languages in question have not necessarily branched from the same immediate node, but may rather have their point of ancestral departure located at an earlier stage. (Cf. discussion of this obvious but often overlooked point in Lass 1997: 123-139). It is one of the powerful features of the comparative method that it allows relationships of this deeper kind to be made visible.

The point made in the preceding paragraph is perhaps made clearer by reference to known cases, such as the situation in the Bantu family, where the languages are certainly related *ultimately* - yet may in some instances belong to only distantly connected sub-branches. It is not out of the question that (legitimate) comparative series based on data for a wide range of Bantu languages may reveal alternations where a segment characterized by voicing in one of the languages may pattern with a segment characterized by aspiration in another. While it would not be impossible, it would be fairly taxing to explain such an alternation in terms of a literal progression directly from one segment to the other – by attempting a mechanical explanation in terms of articulatory or acoustic factors. A more appropriate way to try and explain an *abstract* dynamic of this kind is to refer to (or to project, if necessary) the idealized common ancestral form that has given rise to the different reflexes – conceivably via quite separate routes - following the action and interaction of various diachronic processes at intervening stages.

The Tables of comparative SAK data given at the end of this chapter provide some evidence to support the likelihood, already suggested by the work (1998) of Honken, that there is indeed a sub-entity involving the JU and TAA languages. This new evidence consists in certain patterns that indicate commonalities across JU and TAA in their gender assignment of specific nouns. In particular, nouns in Ju’hoan of the pronominally expressed ka/ka are frequently seen to match !Xóǀ nouns of the pronominal gender  $\tilde{a}h/\tilde{a}h$ .

Thus for ‘urine’, where Ju’hoan has  $g|xám$  [*ka/ka -si*], !Xóǀ has  $llqhám$  [ $\tilde{a}h/\tilde{a}h -tê$ ].

(There are a few exceptions, which appear to involve systematic membership of minor classes not distinguished by the pronominal indices yet reflected in the covarying morphology associated with singular/plural pairs. These will be the subject of a more detailed future study.)

Finally, an attempt is made at the end of this chapter to offer a preliminary set of partial proposals concerning likely characteristics of the ancestral underliers of the modern

southern African Khoesan languages. A sample underlier is projected, based on cases where the likely underliers are in fact already known and not speculative. While it is acknowledged, and even repeatedly emphasized, that some of the accompanying suggestions are tentative, they are nevertheless motivated on both theoretical and observational grounds, and are guided by conventional rules-of-thumb. They will also be seen to have extensive explanatory potential, not only with reference to certain of the alternation patterns involving positional type of click, but also with reference to patterns involving the click ‘accompaniments’. Although the presentation of this model is central to the argument for the underlying relatedness of the SAK languages - since it permits the mapping and explanation of diachronic sound shifts - it is relegated here to an Appendix, because of potentially controversial aspects that might prejudice reception of this work as a whole.

**VI.2. Discussion notes on the pattern types, involving regularly patterned relationships between ‘accompaniments’ (Tables [VI]20-25); between the positional click types (Tables [VI]1-14); and between non-click initials and positional click types (Tables [VI]15-19).**

The notes below should ideally be read in conjunction with the comparative Tables presented at the end of this chapter. It will be seen on referring to these that the comparative material is arranged so as to show different classes of *initial* segments (click and non-click consonants) featuring in repeated cross-SAK patterns. The organization of the series reflects merely an arbitrary arrangement, where the left-to-right ordering happens to approximate a schematic geographic distribution of the languages from west to east. Although the groupings are based on actually known (KHOE and !UI-TAA) or potential (JU-!UI-TAA) classificatory sub-entities, the ordering in the tables does not indicate any literal ‘shift’ or implied directionality. (The ordering of elements in the analogue-type pattern descriptions is also not automatically reversible.)

The arrays presented in the Tables are based as far as possible on words with a reasonable cross-SAK distribution, i.e. with representation preferably in both Khoekhoe and Kalahari KHOE, as well as JU and !UI-TAA.<sup>1</sup> It will be recalled that for some of the languages there is only a very small corpus of recorded vocabulary. It may be partly for this reason that there are many items that potentially reflect and confirm a particular pattern, but which have only a limited distribution. Although they are less than satisfying, some of these



partial series are occasionally shown for purposes of further illustration. Another reason for the shortage of candidate items with a suitable cross-SAK distribution may simply be regional differences in cross-varietal vocabulary, of the type often mapped by means of 'isoglosses'. Much the same situation is found when the lexis of southern Bantu languages is compared across the compass from west to east. Despite the fact that many of the so-called 'basic' concepts are expressed by quite unrelated words in these Bantu languages, this in no way implies that the languages themselves are not ultimately related.

In the course of the notes below, the patterns are merely identified and briefly commented on, with a few aspects of particular relevance being singled out. For example, instances are frequently indicated where patterns involving essentially only the *positional click type* nevertheless show the familiar *interplay of 'accompaniments'* such as nasalization, aspiration and voicing. Instances are also indicated where stems participating in alternations defined purely in terms of positional type nevertheless simultaneously reflect, stem-medially, the familiar *correlations between vowel colourations* such as pharyngealization and breathy-voice (Traill 1986b). Another stem-medial correlation noted in places is an alternation between a voiced bilabial and a voiced alveolar stop [-b] ~ [-d]. Further instances are pointed out of stem-final correlations involving bilabial and velar nasals [-m] ~ [-ŋ]. Lastly, instances are noted of a stem-final pattern involving an alternation between back and front high vowels [-u] ~ [-i]. The discussion that attempts tentatively to *explain* some of the occurrences - as the mappable outcomes of a projected 'underlying' (or 'original') system - is relegated to the Appendix. (It is not appropriate to offer hypothetical composites for individual series.)

The pattern types are divided into four main groups, as follows:

- i. Patterns involving selected 'accompaniments'. TABLES [VI]20-25.

The patterns partially visible in these tables are discussed first, so that the evidence they present of patterns involving fully characterized clicks may be factored into consideration of subsequent discussion, where the patterns (particularly of Type ii below) essentially involve only positional types – which yet alternate, nevertheless, in non-random ways.

ii. Patterns of Type .1. Tables [VI]1-4.

These are patterns that involve cross-series identities for the dental (I), palatoalveolar (II), lateral (III) and (post)alveolar (IV) positional types of click. (The bilabial click does not feature for the simple reason that it does not have a cross-SAK distribution.) These patterns are generally instantiated by only a few series.

iii. Patterns of remaining types. Tables [VI]5-15.

These patterns take each positional type of click in turn as the leftmost term (i.e. of the table), and are coded as follows:

Patterns with the dental click [!] as leftmost term: Types I.2, I.3, I.4 (Tables [VI]5-7).

Patterns with the palatoalveolar click [ʃ] as leftmost term: Types II.2, II.3, II.4 (Tables [VI]8-10).

Patterns with the alveolar lateral click [l] as leftmost term: Types III.2, III.3 (Tables [VI]11-12).

Patterns with the (post)alveolar click [!] as leftmost term: Types IV.2, IV.3 (Tables [VI]13-14).

It was not found necessary to introduce a Type V for the bilabial click, since this click does not have a cross-SAK occurrence, while sequences that include it as an alternating term may be coded within other pattern types.

iv. Patterns of Type 'X'. TABLES [VI]15a and b; and [VI]16-19.

The Type 'X' patterns are so named because the value for the consonant varies, being sometimes a click, 'Q', and sometimes a non-click consonant, 'C(C)'). The notes below will reveal that considerable complexity is brought into the picture by the circumstance that many of the click-initial words are seen to alternate with words commencing in non-click consonants, or other clicks, *within the same language*.

These language-*internal* patterns of variation do not appear to be random, but seem to correlate – at least in some cases - with changes in meaning, as may be noted in series such as I.5 (4), I.3 (7), I.3 (9), II.4 (11), III.3 (12), III.3 (14), IV.X. (4). Crosslinguistically (i.e.,

universally), such patterns not uncommonly arise where the phonetic substance of certain morphemes conditions regular changes that come to be associated in themselves with the relevant implication, while the original morphemes eventually fall away. It does not seem unreasonably speculative or far-fetched to suggest that differences in positional type or characterization of a click - or the presence of a click as opposed to a non-click consonant - may have their origin in some morphophonetic basis. It will be recalled that there is indeed some evidence, particularly within !UI-TAA, for the former existence of prefixing morphology in these languages.

A further pattern that emerges on inspection of these and other tables is an interplay between almost all positional click types and the alveolar fricative [s]. (The pattern is slightly less common in the case of the (post)alveolar click.) This suggests that some type of neutralization is at work, and that [s] in these languages may be reflexive of a number of different underliers. There is ample precedence for this. In Tswana, for example, [s] when seen in certain environments (e.g. before front vowels, or in some cases before vowels of first degree aperture) may be reflexive of ancestral PB \*p, \*t, \*c or \*k.

i. Accompaniment patterns. Tables [VI]20-25.

All five of these tables admittedly present only limited data. Even so it is clear that some fairly regular patterns are present.

Table [VI]20. Plain click /Q/ as leftmost term.

The first two series (a-b) show cases where the plain click in the Khoekhoe column patterns mainly with a similarly plain click elsewhere. While it might be conjectured that some of these words are loans, this possibility is made less likely by the fact that the click positional types in the series are not necessarily identical.

The next five series (c-g) show a pattern where the plain click in the Khoekhoe column alternates with a nasalized click in Ju|'hoan, and where nasalized clicks also appear (in three instances) in Kalahari Khoe. One of the more interesting aspects of this series is that the nouns in the Ju|'hoan column – featuring nasalized clicks – all belong to the same gender (i.e. the gender defined by its singular/plural pronominal forms ka/ka). It has not previously been raised as a possibility that gender might be a factor in the feature characterization of clicks.

The three series (h-j) show a plain click in the Khoekhoe column patterning with a delayed aspirated click in Ju'hoan – and nasalized clicks elsewhere in the series.

Lastly, the three series (k-m) show instances where the plain click in the Khoekhoe column patterns with a voiced click in Ju'hoan.

Table [VI]21. Voiced basic click /gQ/ as leftmost term.

There are very few useful examples to illustrate this case, but it appears (c, d) that a voiced click in Khoekhoe is matched by a voiced click in one of or both Ju'hoan and !Xóǀ. A single example (a) shows nasalized counterparts in Ju'hoan and !Xóǀ.

Table [VI]22. Click followed by voiceless velar fricative or affricate /Qx<sup>h</sup>/ as leftmost term.

Where a click in Khoekhoe has the voiceless velar fricative accompaniment, e.g. !kh ([!x<sup>h</sup> ~ !kx]), there are three instances (a-c) where the counterpart in !Xóǀ has the aspirated feature, e.g. !qh ([!k<sup>h</sup>]). These examples are included in a further set (a, b, d), where the counterpart in Ju'hoan shows either a voiced velar fricative accompaniment, e.g. g!x, or else is characterized simply as voiced.

There are two examples (e, f) where the Khoekhoe click with voiceless velar fricative accompaniment alternates with a voiceless velar fricative accompaniment in Ju'hoan.

In three cases (g-i) the counterpart of the velar fricative accompaniment in Khoekhoe is either a plain or nasalized click in either Ju'hoan or !Xóǀ. In three further cases (j-l), the fricative accompaniment in Khoekhoe alternates with a glottalized click in either Ju'hoan or !Xóǀ. In yet another three cases (m-o), the fricative accompaniment in Khoekhoe patterns with delayed aspiration in Ju'hoan or !Xóǀ. This pattern may also be associated with a voiced click in !Xóǀ.

Lastly, two series (p-q) show the velar fricative accompaniment in Khoekhoe patterning with nasalized clicks in Ju'hoan.

Table [VI]23. Click with ‘delayed’ aspiration (n)/Qʰ/ as leftmost term.

In three instances (a-c), a click with delayed aspiration in Khoekhoe alternates with a nasalized click in Ju|’hoan (and also in one instance in !Xóǀ). In another three cases (e-f) this accompaniment in Khoekhoe patterns with clicks that are either nasalized or voiced in Ju|’hoan or !Xóǀ. Since this accompaniment type is associated with nasal venting, the patterning with nasalized clicks is not unexpected. The further patterning with voiced clicks has been discussed by Honken (1998), as described in an earlier section (III.Pt 2.3).

In two cases (g, h), this accompaniment type in Khoekhoe is matched by plain clicks in Ju|’hoan. In a further two instances (i, j), delayed aspiration in the Khoekhoe examples alternates with a glottalized click in Ju|’hoan and fricative accompaniments, one ejective, in !Xóǀ.

Table [VI]24. Click with glottalization /Qʔ/ as leftmost term.

In three cases (a-c), the glottalized Khoekhoe click patterns with another similarly glottalized click in !Xóǀ.

In another three cases, this accompaniment in Khoekhoe may pattern with an ejective affricate (either as a click accompaniment, or in the form of an ordinary velar affricate) in one of either Ju|’hoan or !Xóǀ.

In the remaining three cases (g-i), this accompaniment in Khoekhoe patterns with a nasalized click in Ju|’hoan and also in one case (g) in TAA, or else patterns with a voiced click in !Xóǀ. The patterning with nasalized clicks is unsurprising, given that the glottalized clicks are associated, like those characterized by ‘delayed aspiration’, with nasal venting

Table [VI]25. Nasalized click /nQ/ as leftmost term.

This table reveals that, in a given series, where the click in the Khoekhoe column is nasalized, nasalization will typically also characterize most of the corresponding segments (cf. series a-h).

In a couple of instances (i, j), a nasalized click in Khoekhoe is matched by a voiced click in !Xóǀ; and in another two cases (k, l) the nasalized click in Khoekhoe is matched by a glottalized click in Jul'hoan. There is too little evidence, however, to indicate that these last two alternations constitute regularly occurring patterns.

ii. Patterns of Type .1. Tables [VI]1-4.

These patterns involve identities of the click *positional* type in equivalent words found across the SAK spectrum. There are not many instances of this pattern for any of the four main click types, and - as Honken noted (1998) - the possibility of borrowing inevitably suggests itself. (Where it seems to apply, this likelihood is indicated in the tables.)

*Pattern of conservative type involving the dental click [ʄ].*

Table [VI]1. Type I.1: | ~ | [16 instances]

A number of the verbs are indicated as possible loans. In the case of the nouns, while it is possible that the word for 'iron, bullet' (I.1.6) has been spread by diffusion, the words denoting animals - e.g. 'hyena' (I.1.7), 'duiker' (I.1.13), 'snake' (I.1.14), 'wildebeest' (I.1.16) - seem intrinsically less likely to be loans.

For those words that seem reasonable candidates for cognacy, the matter of inconsistently patterning click 'accompaniments' may arise as a potential issue. Two aspects of this problem can be addressed here to some limited extent. Firstly, reference to items (9) and (10) - in particular the data for Jul'hoan - suggests that differences in gender assignment may play some role in determining the characterization of a click. (A morphophonological factor of this kind would not be crosslinguistically unusual: latent morphology associated with gender frequently determines the characterization of initial segments in Bantu languages, for example.)

Secondly, the series for ‘duiker’ (I.1.13) shows a pattern across dialects within Namibian Khoekhoe that confirms the interplay previously alluded to between nasalization and aspiration. The series for ‘hyena’ (I.1.7) reflects another aspect of this complex interplay, where voicing (in Ju|’hoan) and Traill’s preglottalized nasalization (in !Xóǀ) appear as alternating characterizations of the click. A relation between aspiration and voicing is also reflected in the words for ‘stop up hole’ (I.1.1). As discussed in an earlier section (III.Pt 2.3), the three features (nasalization, aspiration and voicing) have been allowed (Honken 1998) to participate in valid alternations, in some cases in ‘quirky’ patterns, and in other cases even in patterns of a ‘classical type’, where a semi-regular (though unexplained) association with tone may be detected.

The limited evidence of this first table suggests that there may be an additional pattern, where a nasally characterized or delayed aspirated segment in one variety finds a counterpart in a glottalized click in another, as in the series for ‘skin, shell, peel’ (I.1.9) and ‘duiker’ (I.1.13). This additional aspect is simply noted here.

The verb meaning ‘pierce, drill, open up’ (I.1.2) also features in another series (of Type ‘X’), as will be discussed later.

*Pattern of conservative type involving the palatoalveolar click [ʃ].*

Table [VI]2. Type II.1: ʃ ~ ʃ [4 instances]

Although this pattern seems doubtful, given that there are only four series to instantiate it - two of them partial at that - it is notable, nevertheless, that two of the series consist of verbs regularly used in a grammatical capacity, namely ‘want, desire’ (II.1.2) and ‘suffice’ (II.1.1).

*Pattern of conservative type involving the alveolar lateral click [l̥].*

Table [VI]3. Type III.1: ǀ ~ ǁ [13 instances]

Of these thirteen items, only two are nouns, and of these, the word for ‘dove’ (III.1.4) may have been spread by diffusion. With the few exceptions noted, the words that participate in this pattern are all verbs, and almost all notably have [a] as V<sub>2</sub>.

The interplay between nasalization and voicing is again apparent, cf. ‘stuff food in mouth’ (III.1.2); while an alternation involving clicks characterized respectively as aspirated and voiced may also be seen in the series for ‘sprout, grow’ (III.1.7). A further case is seen in the series for ‘dwell, sit’ (III.1.9) where a voiced click patterns with a glottalized click.

*Pattern of conservative type involving the (post)alveolar click [!].*

Table [VI]4. Type IV.1: ! ~ ! [12 instances]

This set of twelve items shows some of the same interplays noted above between clicks variously characterized as nasalized and voiced, cf. the series for ‘look for’ (IV.1.12), or nasalized and glottalized, as in the series for ‘white’ (IV.1.1).

The words for ‘vein, tendon, artery’ in series (IV.1.3), ‘hunt’ (IV.1.10), and ‘scratch’ (IV.1.11) reflect a pattern noted by Traill (1986b), where a vowel feature of pharyngealization may pattern with breathy-voicing in a cognate item.

The words for ‘scratch’ (IV.1.11) are of additional interest insofar as they suggest that V<sub>2</sub> may participate in an alternation [u ~ i].

iii. Patterns of remaining types. Tables [VI]5-14. [6 instances]

The patterns of remaining types are fairly diverse, and include some minor sub-patterns.

*Patterns with the dental click [!] as leftmost term.* Tables [VI]5-7. Types I.2, I.3, I.4



Table [VI]5. Type I.2: | ~ (ll) ~ ǃ.

This pattern is perhaps a sub-type of the pattern Type I.3 below, which involves only the dental and lateral alveolar positional types, without a bilabial type in the alternations.

The series for ‘become dry’ (I.2.2) presents something of a conundrum, since words with a dental click as initial - and words with a lateral click - are seen to co-occur within the same variety. (Vossen in fact reconstructs two separate forms for Kalahari KHOE, one in \*|ʔo, and the other in \*llxo, and the series really needs to be considered in conjunction with series (1) in the earlier Table [VI]3.) As noted in the table, words meaning ‘dry up’ may be used euphemistically in some languages for ‘die’; while other languages may have separate words for ‘die’ that nevertheless bear a slight formal resemblance to words for ‘dry up’. (The same semantic link is found in some Bantu languages.) It seems likely that the KHOE words reconstructed for Proto-Kalahari as PKal \*|ʔo are the ones that belong in series with !Xóǃ ǃ’òo; while the Khoekhoe word ʔhürú patterns with !Xóǃ ʔnǃo. The second pair shows clicks respectively characterized by delayed aspiration and ‘preglottalized’ nasalization. In the case of this second pair also, there is a stem-medial alternation involving a pharyngealized vowel sequence and a sequence VrV.

Of further interest is the existence of a doublet in !Xóǃ, which also has ʔ’òo as the perfect (and potentially descriptive) form meaning ‘be dry’, in addition to the word with the bilabial click. This may be simply a loan from a Kalahari Khoe source.

The words for ‘wildcat’ (I.2.5) probably reflect diminutives of the word for ‘cheetah’, as the Nama term would imply. (On the other hand there is some minor ambiguity reflected in the two words given for !Ora. The slight possibility exists that the words have their origin in - or are confused with - a further term for a coat-pattern colour.)

Table [VI]6. Type I.3: | ~ ll. [17 instances]

This pattern, with 17 instantiations, is also seen internally within JU, within Khoekhoe KHOE as well as Kalahari KHOE; and within S1-S2 of !UI (|Xam and Dll-!ke). The

words for ‘pale yellow-green, vaal’ (I.3.4) show the familiar patterns of interplay as far as click ‘accompaniments’ are concerned, in this case involving aspiration and voicing. (The pattern-fit incidentally confirms the cross-SAK status of this specifier series.)

The series for ‘expand, spread out’ (I.3.9) illustrates a case where a sequence VrV patterns with a breathy-voiced vowel sequence. Further internal alternations are noted between these two clicks and an alveolar fricative or affricate

Series such as the words for ‘expand’ (I.3.9) and ‘sun, day’ (I.3.14), which show variants with the two clicks occurring in some cases as a language-*internal* phenomenon, begin to suggest that some latent determining factor might be involved. In a few cases, cf. particularly the Jul’hoan examples for ‘beads’ (I.3.7), where different types of beads are indicated by minimally differing stems - the different initial appears to be associated with a difference in meaning.

The series for ‘love, like’ (I.3.12) reflects an instance where a stem-final velar nasal in [Xam patterns with a bilabial nasal in other languages. Similar instances are seen elsewhere, and suggest that it is a pattern future reconstructions will need to take account of. Crosslinguistically speaking, the implied ‘shift’ is not unusual.

Table [VI]7. Type I.4: |~! [11 instances]

The words in series (I.4.4) for ‘flower, bloom, sprout [n]’ for the Sesfontein dialect of Dama collected by Haacke, Eiseb and Namaseb (1997) show this alternation involving the dental and (post)alveolar positional click types occurring also as in internal pattern within the dialects of Namibian Khoekhoe. (The series for ‘roan, chestnut’ (I.4.8) seems to reflect a similar variation within !Ora, but it is possible that these are really a conflation of two different colour terms, one meaning ‘grey, charcoal’ and the other ‘red-brown’.)

The words for ‘flower, bloom, sprout’ also illustrate a commonly seen pattern whereby medial [b] alternates with [d], particular when followed by [u]. This phenomenon is discussed in more detail below under the notes for Table [VI]15a.

The most significant aspect of the words for ‘flower, bloom, sprout’, however, is that some of them provide further evidence for the existence of some underlying morphophonetic factor that is perhaps associated with the presence of a click. As may be seen on reference to the table, the series is placed in juxtaposition with a cross-SAK series of verbs meaning ‘sprout, germinate, flower, bloom’. It is apparent that some relationship exists between verbal and nominal forms of this root across the SAK spectrum, where the interplay seen in each language between click and non-click consonants, or between two different click-types is evidently not accidental, but suggests itself as derivational.

The sequence spanning JU-TAA provides a further illustration of the correspondence between pharyngealization and breathy-voicing of vowels; and also gives another example of V<sub>2</sub> in an alternation [u ~ i]. The latter is a further pattern that will need to be accommodated in future reconstructions.

*Patterns with the palatoalveolar click [ʈ] as leftmost term.* Tables [VI]8-10. Types II.2, II.3, II.4.

Table [VI]8. Type II.2: ʈ ~ | [12 instances]

The words for ‘fat, oil, marrow’ (II.2.9) illustrate a commonly seen pattern involving clicks in apparent alternation with the alveolar fricative [s]. In this case, the words for JU-TAA are of particular interest, since they show both dental and lateral clicks alternating with this non-click consonant. The Ju ]’hoan word llà’á [ka/ka] for ‘marrow’ seems to be a clear affine of the !Xóõ sàã [ãh/ãh], where the gender assignments seem to match, and the glottalized vowel sequence in the JU word has its counterpart in the TAA pharyngealization.

Table [VI]9. Type II.3: ʈ ~ ll ~ ( | ) [6 instances]

Some of these series (3, 6) further illustrate the interplay between delayed aspiration and nasalization while the series of words for ‘arm, forearm’ (II.3.3) shows another example of vowel pharyngealization patterning with breathy-voicing (cf. JU and TAA).

The table also shows several instances of clicks patterning with non-click alveolar consonants. The series for ‘mix’ (II.3.5) will feature again in the context of Type ‘X’ patterns. The series of words for ‘winter’ (II.3.4) provide another example of the lateral alveolar click in pattern with the alveolar fricative [s].

Table [VI]10. Type II.4: ʘ ~ ! [13 instances]

The words for ‘hook [m]’ in series (II.4.2) are of interest when considered in conjunction with words for the verb ‘hook [vt]’ (III.3(11), in Table 12, as will be discussed in that context below.

*Patterns with the alveolar lateral click [ll] as leftmost term.* Tables [VI]11-12. Types III.2, III.3, II.4.

Table [VI]11. Type III.4: ll ~ ʘ [9 instances]

Concerning the series for ‘smile, kiss’ (III.4.3), it is notable that interrelationships seem to exist across the SAK spectrum between words meaning ‘kiss’ and ‘smile’, and that several of the languages seem to have *parallel* phonetic interplays involving these pairs. Namibian Khoekhoe, for example, has llóà ‘kiss’, and ʘnǒm ‘smile’; while Jul’hoan reflects ʘ’ómá [vt] ‘kiss’ and zoma [vi] ‘smile’. (Equally notable is the Xhosa pair -nyomla ‘smirk’ and -n|uma ‘smile’.)

Table [VI]12. Type III.3: ll ~ ! [28 instances]]

The series for ‘hook [vi]’ (III.3.11) and ‘rain, drizzle’ (III.3.12) show an alternation of this kind occurring *cross-dialectally* within JU of these two positional click types. As discussed earlier (in Ch. III. Pt 2. 4), patterns involving these two positional types of click have been taken in the past (Vossen and Traill 1997) to imply a literal dynamic of ‘horizontal’ progression from one to the other, and this ‘sound shift’ has been interpreted as a preliminary to eventual click loss.

This Table, however, shows the existence of language-*internal* variants. For example, series (III.3.14) shows an internal pattern in the eastern Kalahari variety involving a minimal pair of !*kaba* and ||*kaba*, where the first means ‘tendon’, and the second ‘thread, riempie’. Since the phonetic difference seems relatable to some aspect of semantic classification, there is potentially an underlying morphophonological factor involved. One possibility would be to treat the two reflexes as former allophones of one another (i.e. having a common ‘underlier’) where each variant, however, has become phonologized - following loss of the distinct features in the morphophonetic environments that previously conditioned them.

The series for ‘short’ (III.3.8) shows in !Ora an instance of [! ~ †] variation (apparently free) embedded within this alternation type that otherwise involves the lateral and (post)alveolar positional types. Possibly related to this isolated occurrence - and of particular interest in any case - is the patterning involved in verbal versus nominal stems. In the Table under discussion here, the series (III.3.11) involves the *verbal* form ‘hook [vt]’, which shows JU-internal variations of the kind [|| ~ !]. However, it was seen in Table ([VI]10) that the equivalent *noun* ‘hook’ (II.4.2) participated in JU-internal alternations of the type [† ~ !]. Since these nominal forms of the root are realized with initial clicks of different positional type from the verbal forms, this adds to the impression that the driver of some of the variations seen may be derivational.

*Patterns with the (post)alveolar click [!] as leftmost term.* Tables [VI]13-14. Types IV.2, IV.3.

Table [VI]13. Type IV.3: ! ~ (l) ~ † [6 instances]]

This pattern is somewhat marginal, although the partial series for ‘bitter’ (IV.3.6) across JU-TAA seems well-formed, given that it reflects the known pattern of alternations involving glottalized and pharyngealized vowels. (The series for ‘egg’ (IV.3.4) also features in a pattern of Type ‘X’, to be discussed below.).

Table [VI]14. Type IV.2: !~ll. [13 instances]

This pattern [! ~ ll] has been noted:

- \* as a JU-internal pattern by Westphal (1974), Snyman (1980, 1997) across varieties of Ju |'hoan (Southern JU) - and Central and Northern !Xuũ ;
- \* as a cross JU-TAA pattern by Honken (1998) across varieties of Ju|'hoan, !Xuũ - and !Xóǒ; and
- \* as a cross !UI-TAA pattern by Güldemann (2004c).

The cross-SAK instantiations of this prevalent pattern have given rise to the theory of Traill and Vossen (1997), of a generalized process of progressive click shift ('weakening') prior to loss, previously discussed (Ch 3. Pt 2.4).

iii. Patterns of Type 'X'. TABLES [VI]15a and b; and [VI]16-19.

The Type 'X' patterns are so named because the value for the consonant varies, being sometimes a click, 'Q', and sometimes a non-click consonant, 'C(C)').

Tables [VI]15a and b. Type X.1: C(C) ~ C(C):

The series in these tables reflect a partial Type X pattern (sub-type .1), where non-click consonants occur in alternation *mainly* with other non-click consonants. The words in Tables 15a and 1b chiefly illustrate stems with initial alveolar or palatal stops, fricatives or affricates.

Table [VI]15a. Type X.1: C ~ C(C). [33 examples]

The C<sub>1</sub> segments in Table 15a are almost all *simple* oral or nasal stops, with affricates appearing only occasionally in the series. It is a notable feature of these 'simple' stops that they are almost all alveolar. Coupled with this, it may be observed that - of the very few examples (1-9) with initial labials - almost all appear to have Bantu-like underliers, as indicated by the additional information supplied in the lefthand column.<sup>2</sup> Likewise, the few examples with velar initials, namely 'kraal, pen', 'year', 'bellows' and 'navel' (X.1.30-33) similarly have Bantu-like affinities (even where these have been reconstructed

for Proto-KHOE). It may be suggested that these few words are simply loans from one or other of the sources indicated. Yet a few of the series hint at a greater complexity than this. For example, it is possible to place alongside the series for ‘give’ (X.1.3), ‘carry on back’ (X.1.6), and ‘navel’ (X.1.33) an apparently related series in each case containing words with *click* initials.

The ‘Bantu-like’ aspect of some of these words suggests a partial preliminary explanation for the scarcity of labial segments as initials in Khoesan languages. Certainly the KHOE languages appear to have been characterized at some stage by a neutralization process very similar to the one seen in Kwanyama and possibly a few related languages of the Kavango region (cf. Baumbach 1997). As Halme (2004: 13) states the process seen in Kwanyama,

‘an alveolar plosive reflects the reconstructed \*b, \*d and \*g before \*i and \*u.’

The operation of Kwanyama-type neutralizations would explain the alveolar-initial reflexes (in KHOE languages at least) of words for ‘mouse, rat’ (X.1.10), and possibly ‘pierce, drill (X.1.12). This process has already been noted - cf. words for ‘sprout, grow’ (I.4.4) - to operate in medial contexts, where it gives rise to alternations of the type [b ~ d] involving C<sub>2</sub>.

Another typically ‘western’ process that appears to have operated in some Khoesan languages involves a form of anticipatory nasal assimilation, where an initial oral stop transmutes to the corresponding nasal under influence of a nasal segment at C<sub>2</sub>. An example of this phenomenon is seen in the Proto-Bantu form \*-móna, which is interpreted as a variant of \*-bóna. (Although other analyses - cf. Schadeberg (1987), Stewart (1999) - are possible, these need not be revisited here.) The effects of such a process are seen in examples (X.1.3, 4, 5, 6, 8, 9, 15, 16, 21, 21, 22, 23, 24, 25).

Table [VI]15b. Patterns of Type X.1: C(C) ~ C(C). [50 examples]

The examples shown in this table mainly involve stems with initial affricates, as noted above. These may be plain, aspirated or ejective; and may additionally be voiced or voiceless in some varieties. (Although the affricates are mainly alveolar, some varieties reflect palato-alveolar forms.)

Like those presented in Table 15a, the vast majority of these words have Bantu-like affinities, as demonstrated by information provided in the lefthand column. It may again be proposed that these words are merely loans. Certainly it is noted that of the 19 words recorded by Snyman (1975) with initials in the aspirated alveolar [t<sup>h</sup>], four of them were explicitly identified by him as loans from Tswana or English; while Traill similarly acknowledges (1994, scattered) a number of words as loans from Tswana.

Nevertheless, many of the remaining words do indeed appear to be *intrinsic to Khoesan*, on the following grounds:

i. Several of these words are among those that were found by Vossen (1997) to be reconstructible for Proto-KHOE or one of its sub-branches. It might still be suggested that any such ‘Bantu-like’ words have merely been reconstructed in error (as can easily happen) and should simply be disallowed. This might make sense in some cases, e.g. in the case of words reconstructed for ‘sheep’, ‘cow’, ‘bellows’, ‘year’, ‘navel’ and ‘breast’. Yet some of the other words have a *cross-SAK* distribution – where this is not always readily dismissable as a diffusion phenomenon. A few of them (marked ‘AT1’ or ‘AT2’) have previously been proposed as cross-SAK items by Traill (1986b); while others (marked ‘HH-JU-TAA’) were identified as *systematic* members of JU-TAA series by Honken (1998). What is more, the available dictionaries of Khoesan languages appear to reflect a general consensus that *all* Khoesan languages have a subset of authentic words with non-click affricate initials. Taken together, these factors suggest a reasonably well-embedded status for the words in question.

ii. The table also reveals (if to a limited extent only in this initially simplified presentation) that some of these words (i.e. with ‘Bantu affinity’) alternate systematically with related *click*-initial stems, either in cross-SAK or own-subgroup internal series. It furthermore appears to be the case that some of the intralingual variants are associated with non-random differences in meaning. This suggests that the clicks are in some sense conditioned outcomes. A further implication is that the clicks in these cases should be projected as having conventional underliers – since the latter are already present in existing reconstructions for many of the Bantu items.



Tables [VI]16-19: Remaining patterns of Type 'X':

Some of the arrays given earlier were simplified for purposes of preliminary exposition. When the sets are expanded and the more complex reality is examined, it becomes clear that all five click positional types participate in patterns where they alternate cross-varietally (i.e. cross-SAK) with ordinary non-click consonants ('C(C)'). Examples of these remaining patterns of Type 'X' - where a click alternates with a non-click consonant - are shown in the last four tables. Patterns of Type X involving bilabial clicks are largely incorporated as sub-types of correspondence Type IV.X.

Table [VI]16. Type I.X: | ~ C(C). [15 instances]

The best-known instantiation of this pattern involves alternations between the dental click [ʄ] and an ejective alveolar affricate [ts'] (cf. Traill 1986b).

The (admittedly few) occurrences of the click-initial forms in Namibian Khoekhoe posed a puzzle for Vossen, as has been seen, since he found it impossible to reconstruct anything other than the non-click affricate for Proto-KHOE as a whole. The implication is that the Khoekhoe clicks are innovations. However, the possibility of click genesis in general was not accepted by Traill and Vossen (1997), who briefly discussed the idea, but rejected it.

Needless to say, it is not assumed in the present work that the non-click consonants ('C') seen as the alternating terms in some of the patterns necessarily themselves represent the direct underliers of the click consonants - i.e. that the clicks are merely their 'converted' or 'enhanced' forms. It is far more likely that both types of reflex share a common underlier.. It might also be noted that, given its seldomness of occurrence (universally speaking), the emergence of clicks seems likely to have involved a relatively rare combination of several different factors and processes.

Table [VI]17. Type II.X: † ~ C(C). [11 instances]

This pattern, interpreted in the past as the visible evidence of click loss, classically involves alternations across Kalahari KHOE between the palatoalveolar click [ʃ] and a range of non-click palatal (or palato-alveolar) affricates (cf. Traill 1986a). (In the case of

ǁXegwi (Lanham and Hallows (1956a) the alternating consonant is in a few instances a lateral ejective plosive [kl']).) As the evidence in the 'Notes' column of the table makes fairly plain, however, the non-click variants can in many cases be matched to 'Bantu-like' underliers, where these are most often *reconstructed with palatal initials*. The implication is that the palatoalveolar click is probably 'emergent', and that one of its underliers may have been a conventional palatal segment.

Table [VI]18. Type III.X: ǁ ~ C(C). [4 instances]

Two points previously made are confirmed by this table: namely, that *non-click and click-initial* stems appear to co-occur intralingually (i.e. within the same variety); and that minimal pairs involving stems with different click-initials may also co-occur within individual languages, where they are seemingly associated with slight differences in implication, cf. the series for 'dig' (III.X.4).

It is notable that some of the non-click segments in the series are *alveolar* affricates, just as they are in series involving the dental click.

Table [VI]19. Type IV.X: ! ~ C(C). [20 instances]

Subtype i: ! ~ | ~ (C(C))

Subtype ii: ! ~ ⊙ ~ (C(C))

The (post)alveolar click [!] has long been noted to alternate with ordinary velar consonants in a pattern considered the norm for click loss (e.g. D. Bleek 1956: 73). The velar segments found in such series across Kalahari KHOE are shown by Traill (1986a) to carry the same features (i.e. in most cases, with the exception of glottalization) as the corresponding clicks. The example of words for 'chin, jaw' (IV.X.4), illustrating words for 'chin, jaw', again seems to illustrate, however, that intralingual variations in a click type may be associated rather with a semantic distinction. (Of course it is *possible*, as might be alternatively conjectured, that new meanings could routinely have been conferred on variants arising as a consequence of click loss; but this seems an elaborate scenario.)

The examples in this table also show that the (post)alveolar click may occasionally pattern with a *dental* click - cf. Subtype (i) - and simple *alveolar* non-click consonants. Neither of these patterns fits into the model of click loss.

The examples in Subtype (ii) illustrate a pattern already seen briefly in Table 15a, where a relationship seems to emerge between the bilabial and (post)alveolar clicks in some contexts - and an underlying labial segment.

*Summary of the section.*

The notes above have itemized multiple instances of regular patterning across the SAK spectrum, where these patterns are most visibly systematic when the *positional* type of a click is considered alone - without its possible elaborations - but where the fully characterized segments are nevertheless seen to participate in a number of known patterns involving ‘accompaniments’ such as voicing, nasalization, delayed aspiration and glottalization; and where the stems of the alternant morphemes have moreover frequently shown known patterns of correlation involving vowel features such as pharyngealization and glottalization.

The demonstrated patterns may not constitute convincing correspondences in the classical sense of the word. However, as remarked at the outset of this chapter, the fact that the alternations of positional click type are (a) recurring and (b) do *not* necessarily involve identities, makes it fair to suggest that there is a non-randomness to the whole picture. It may perhaps be said with reason, then, that the items in the comparative series are rather more likely to be inherited than they are to be borrowed – particularly when considered in conjunction with the structural evidence of earlier chapters.

As for the the statement of ‘sound shifts’ that might be suggested by the patterns described above, an Appendix to this work puts forward a tentative sketch-model that attempts to capture a few preliminary aspects of the likely forms of common ancestral stems for the Khoesan languages, from which it may eventually be possible to map the pathways via which the alternating reflexes have emerged.

## NOTES.

1. In previous comparative studies of a statistical kind it has been considered necessary to place some sort of constraint on the number of words searched for potential ‘cognates’, on grounds that the greater the pool, the greater the likelihood of finding chance lookalikes (Cf. Sands (1998) and to a lesser extent, Hastings (2001) both of whom restricted their databases to expressions from a set of approximately 100 Swadesh-type ‘Basic Words’.) It would be mistaken to suggest that such a principle should have been imposed here: the present study is based on a different methodology, where the attempt to establish cognacy is based on a search for abstract patterns, not resemblances.

2. Sources of the Bantu data provided in Tables 15a and b: **Zulu**: Doke, Malcolm, Sikakana & Vilakazi (1990); **Xhosa**: Fischer, Weiss, Mdala, & Tshabe (2006); **Kwanyama**: Tobias and Turvey (1954); **Ndonga**: Viljoen, Amakali & Namuandi (2004); **Karanga**: Louw (1915); **Swati**: Rycroft (2008); **Venda**: Van Warmelo (1989); **Sotho**: Mabile and Dieterlin, rev. Paroz (1988).

[N TABLES for Chapter VI. TABLES [VI]1-4. Tables showing patterns of identities involving the dental, palatoalveolar, lateral and (post)alveolar positional types of click.

n Table [VI]1. Pattern Type I.1: [~]

able 1 e I.1			Proto- KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto-KHOE (Kalahari; WkaK, EKaK)	JU	TAA	!UI	!UI
s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju!'hoan	!Xóǀ	Xam	#Khomani
	I.1(1)	stop up hole		'hóǀ	ǀǀǀ [Nar]				ǀǀǀ kV	ǀkum [S1]	
K.1(12)	I.1(2)	pierce, drill, bore, open up hole			ǀhúǀ [Nar]; ǀxúǀ [Khwe]			(ǀù) ǀhúǀ [vǀ] [loan?]	ǀq'òǀo kV 'make small hole'		
ial, ?	I.1(3)	pray, plead		ǀkhóma				ǀxòm [vǀ] 'pray, plead for' [loan?]			
	I.1(4)	share, serve out		ǀǀrà [ǀgora]; hǀǀrà				ǀoarah, ghoa	ǀǀǀo kV		
?	I.1(5)	urinate			ǀǀrè [Nar]	ǀhwere		ǀǀǀre [N1]			
sible a	I.1(6)	iron, bullet	*ǀ'uri [PKK]	ǀ'úǀǀ-b [ǀuri-b] [N]; ǀkx'uri [!Ora]				ǀkx'úǀǀ [ka/ka -si]		ǀk'uri [S1]	
	I.1(7)	hyena sp.		ǀnǀúǀbi-s (poetic, of spotted)				ǀǀǀǀh [ǀha/ǀhi -] (spotted) [Di]	'ǀnǀúǀ [ǀǀh/ǀǀh 'ǀnǀǀǀ-ǀtǀ]	ǀku: [S1]	
	I.1(8)	cloud, mist		'hǀǀm-mi 'sky'						ǀkhumim 'mist' [ǀXam]	

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju]’hoan	!Xóǀ	Xam	#Khomani
	I.1(9)	skin, shell, peel (n)		hǒó-b				n]ǀ [ka/ka -si]			!ʔuuǁke ‘tsamma shell’ [Do]
	I.1(10)	friend, age- mate		hǒó-b				hǒ [ha/si -si] [Sn]	kx’ǒe [ǂh/ ùh]		
al	I.1(11)	shoot (hit target) ‘raakskiet’				gaie ‘aim at w bow’		(txá [Sn])		xǐ:,  xǎ: [S1];  xe:  a [S2]	
ible ; but .3(15)	I.1(12)	be thirsty, hot		ám [  gam] ‘bec. hot’	ám	kamo ‘thirst’		ám [vi] ‘be thirsty’ [loan?]			
	I.1(13)	duiker		nǎ̀n-s [  nǎ̀u-b/s],  hanu-s [D, Hm]	n]ǎ̀ǀ [Nar]		* ǎ̀ [PKalK]	!ʔáú [ha/hi -]		nau [S1]	
3(10)	I.1(14)	snake	* x’ǎ̀o [PK, PKK]	!ʔǎ̀ǒ-b [  ǎ̀o [N];  kx’ǎ̀o [!Ora]	x’ǎ̀o (gen.) [Nar]	gauo	* x’ǎ̀o [PKalK; PWK], *!ʔǎ̀o [PEK]	-		( k’ǎ̀u [S2])	kx’ǎ̀u [Do]
SAK	I.1(15)	fire [n.]	PK, PKK *!ʔai	!ʔǎ̀ǎ̀- [  ǎ̀e-s]	!ʔee [Nar-Vi], !ʔé [Khwe]				!ʔǎ̀ǎ̀ [!Xóǀ]	ǐ [S1]	ǁ!ʔii [N]uu]
	I.1(16)	wildebeest (blue), gnu			ǎ̀é [Nar];  ǎ̀é-n]lgo [Khwe]	kee	* ǎ̀é (PKalK, PWK, PEK)	ǎ̀in [ha/hi]			ké [Do]  ee [N]uu]

n Table [VI]2. Pattern Type II.1: #~#

able 2. e II.1. #			Proto-KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI
s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK, PWK, PEK	Ju 'hoan	!Xóǿ	[Xam
- OE-JU ough', C	II.1(1)	suffice, be enough		#ʔàùn [ #âù] 'have enough'	#ʔào 'be enough' [Nar]			#ʔàùn [ <i>adj</i> ]	#ʔāũ 'sufficient'	
	II.1(2)	WANT, desire		#ao[#gao] [AUX] [stative]	#áo 'want' [Nar, Xanagas var.]; n#ã [Khwe]			n#hao [Sn] (in compound)	#áo kV 'long for', #ʔán-sí 'wish'	#kaò-wa [ [Xam]
	II.1(3)	hit (target)		#ʔàwǒ [#apo] 'hit offguard'				#aoh [ <i>vt</i> ]	#ʔāa	
sible ns	II.1(4)	birth, give (prem.)		#khàm (of animals)				#xàm [ <i>vi</i> ]	#xâm 'have stillbirth'	

in Table [VI]3. Pattern Type III.1: ll ~ ll

Table [VI]3. Pattern Type III.1: ll ~ ll			Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA—HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI
es	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju'hoan	!Xóǿ	[Xam
III.2(2)	III.1(1)	bec dry, withered			llxóó [adj] [Nar]; llxó 'be dry' [Kh]		PKal *llxo		llǻa 'dry out' [!Xóǿ]	llkó-kǻn, llkō-wa
	III.1(2)	stuff food in mouth		llòwà [llgowa]			*llnom [PKalK]	gllóbá [vt] 'stuff in cheeks'	llGóm kV	
	III.1(3)	tortoise sp.		llòwà [llgowa] 'bow-legged one' [pr n]				llò'á [ha/hi -]	llnúǻ/ llnúm (Leopard tortoise)	llgo: [S1]
	III.1(4)	dove		ll'hòwǿb				ll'hóbó [ha/hi -si] [loan?]	llòba [ǻh/ǻh -tǻ]	
2	III.1(5)	scrape clean		llkhǻó [vt]	llxáó			llxáúǻ-llxáúǻ [llxǻu-llxǻu [Sn]][vt]	llnú; gllkx'álu kV 'scratch, scrape'	
	III.1(6)	chop, cleave, split		ll'hǻá [vt]	llx'ao [Nar]		*llx'ao 'abschlagen, abhacken' [PKalK]; *ll'ao [PEK]		llǻa [sg], llǻǿ [p] [llǻV]	
	III.1(7)	sprout, shoot, grow	*llhao	llhau [!Ora]			*llhao [PKalK, PWK, PEK]	gllaòh (of bulb) [vt] [Di]	gllǻò	



s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam
	III.1(8)	clasp, squeeze, clamp		llkhǎmǐ	llʔam			llàq'á [vɪ]	llqhábe kV	
C	III.1(9)	dwel, sit, settle, sojourn	PK * llʔan(i)	llʔan [llan]	llʔǎè [Nar]; llʔán [Khwe]			glláa [Sn]	llgáǎ 'pass time'(> 'in process')	llan, llēi, llen:, llenna
	III.1(10)	tell, relate	PK *lla	llae, llare [llgae, llgare]	llnàè [Nar]; nlláá [Khwe]				llnále kV	
l em-	III.1(11)	together, be assembled		llʔǎé [vɪ] llʔǎré [vɪ] [llae, llare]	llx'ae			llkx'áé [vɪ]		llk'ɛ:[S1]
	III.1(12)	hang (up), suspend		llàá [vt] [llgaa] 'hang, wear round neck'				glláo [vt pl obj or vi pl subj Cf. llú] 'hang, wear'	'llnāhō kV 'h. up'; llàa [llaV] 'put round, wear'	
2	III.1(13)	wash	*llxʔa [PK: PKK]	llʔáá [llaa]	llx'aá		*llxʔá [PKaIK; PWK], *llʔa [PEK]	llkx'á [vɪ]		lləri: [S1]

n Table [VI]4. Type IV.1: ! ~ !

able 4. e . !			Proto- KHOE (Khoe: Khoe- khoe)	KHOE- KHOE	West KALA— HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKaK, EKaK)	JU	TAA	!UI	!UI
s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK, PWK, PEK	Jul'hoan	!Xóǝ	[Xam	ǂKho- mani +
XC	IV.1(1)	(be) white		!ʔuri [!uri] [Nama]	!ʔúú !ʔó, !ú, !ó [Nar-Ba], !ʔúú [Nar-Vi]		*!ʔu [PKaK]		!núi-sa [n]	!kui:ta [S1]	ŋ!ʔuʔi-ja [Ma]
	IV.1(2)	croak, roar, 'brom', 'brul'		!ǝm [!gom]				g!ǝqm [vi] (of frog)		!gumm 'roar, call, brom (e.g. of ostrich)' [Xam]	ʔ(!koʔǝ [Do]) cf. 'snore'
	IV.1(3)	vein, artery, tendon			!ǝǝ (v. in neck)			!oq'um [hi/hi -si]	!ǝǝǝ [!h/!h !ǝǝ-tǝ]		
	IV.1(4)	stone, rock, mountain, hill, koppie		!nǝm̄mi/s				n!óm [ka/ka -si]	!ùhm sà'ā 'dune, hill'		!ŋǝ (ú) [Do] 'dune, hill'
X(1)	IV.1(5)	thong, strip of skin, riem		!hǝǝn-b [!hǝub]				!arùh [ka/ka -si] 'strip of skin'	ʔ(g!kx'āla [ǝh/ǝh g!kx'ān])	!hǝǝ [S1]	(!kan [Do])
OE- A, C	IV.1(6)	remain, stay behind, dwell		!au [!gau] 'stay/ leave behind'	!aù 'stay, remain, leave behind' [Nar]		PkaK *!au	!nau 'sit down, set, alight, live' [NI]	!āo 'stay behind, leave'	!hau <sup>9</sup> 'visit', !kǝu 'sit' [SII]	
	IV.1(7)	bag		!ǝú-s [!gau-s]		!kau		!àù [ha/ha]	!ǝǝǝ [ǝh/ǝh !ǝǝ-tǝ]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani
ble	IV.1(8)	wring, twist			!x'ari 'wring'			!kx'ari [vt]	!kx'ali		
ble s; - AA]	IV.1(9)	cloth, fabric		!ǎé-s [!gae-s] 'loincloth'	!xái 'clothes' [Nar]			!xái [ka/ka -si] 'cloth'; !x'ái [ha/ha -si] 'loincloth' Sn]	!xái [i/ùh !xába-té]	(!xe: [S2]); (!xēi 'clothes' [S2])	
DE-	IV.1(10)	hunt	*!hami [PKK]	!hǎé-!àù 'chase- hunt'	!ǎe [Nar]			!ǎǎ [vt]	!qǎhe kV	?(!hǎn [S1])	
al	IV.1(11)	scratch [v]						n!ǎǎ'ǎ [vt]	!nǎhu		
	IV.1(12)	spy out, look for	*!a [PK]	!ǎwǎ 'look'	!aa-!aa		*!a [PKalK; PWK]; (*ká [PEK])	n!ǎǎm [vt]	!nǎǎ [!ngV]		

**Table [VI]5.** Pattern Type I.2: |~(ll)~ ⊙.

Pattern type – showing iterated alternations of *click positional types* - is perhaps a subtype of the pattern Type I.3 below, which involves only the dental and lateral alveolar places, i.e. without a bilabial reflex in the series.

Table	i. Type		Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari: WkaK, EKaK)	JU	TAA	!UI	!UI		
	~⊙	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóð	Xam	#Kho- mani	N uu
				l	l, ll			ll	l, ⊙	l, ⊙			
	I.2(1)	be sick, tired		khûi 'bec.sick' [Nama];  ûi [  gui] 'tired of, jaded'	llk'uiã [Nar-Ba]			llkwĩ [N1], kwi [N2]	úni-ni 'illness' [!Xóð]	ku: [S1]	⊙ <sup>2</sup> wi <sup>2</sup> i 'tired' [Ma]	ʔ⊙ <sup>2</sup> ui <sup>2</sup> i [N uu]	
I.1(1)	I.2(2)	bec. dry		ʔóò [vi] [  ō] 'go dry';  hûrú 'dry out';  khuru 'bec. dry' [Nama];  ʔo [!Ora] 'wither, be dried'	ʔóò [adj] [Nar];  ʔóò [vi] [Khwe]		PKal * ʔo		⊙ <sup>2</sup> óo 'dry out';  ʔóo 'be dry';  nḡo 'evaporate, die [euph]'				
I.2(2)	III.1(1)	bec dry, withered			llxóò [adj] [Nar]; llxó 'be dry' [Khwe]		PKal *llxo		llḡa 'dry out' [!Xóð]	llkó-ḡen, llkō-wa 'dry out'			

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
tain	I.2(3)	rub, smear, anoint		nòwǒ-sèn; sówò	llxòm [Nar] tsòro			nllhóm [vt]	ǀǀóm 'w. fat',  ǀǀhm sV, ( 'on' ) ǀǀqǀhùǀna (off)	!kwǀobe [S1];   kuna  e: [S2]		ǀǀuu [N uu]
IUU M, C	I.2(4)	young, small, DIM.			oa [Nar-Vi] ; - x'óá [Khwe], kx'óá [Khwe]		*kx'oa [PKalK]		ǀáá [ǎh/ǎh ǀ'áni] [!Xóǀ]; ǀpwa-i [ ! 'Auo]	-ǀpwa		
	I.2(4a)	child, son	*ǀǎ [PK]	oan-b [ ǀǎa-b]	óá [Nar]; ǀǎ [Khwe]	gwa	*ǀǎ [PKalK; PWK, PEK]		ǀǀǀáá [a ] [ǎh/ǎh -ní], ǀáá [inal] [ǎh/ǎh -tù]	!khwǎ [sg], !kau- kn [p ] [S1]; ǀpwa 'baby' [S1]		
M of etah? (could also be colour.)	I.2(5)	wildcat		(!árò)- hǀǎn-b/s [N]; ǀǎa-s,  hǀǎ-b [!Ora]	nǀǎ	guri- jwa "tiger- cat"		nǀoahn [ha/hi -]		ǀmwa [S2]	ǀǀpwa [Do]	ǀǀOoa [N uu]
	I.2(6)	fly	*ǀani	ǀiǀnǎ-s [  ǀǎa-s]	ǀǎné [Nar]	ǀǎnee 'fly, bee'	*ǀani [PKalK; PWK], *ǀini [PEK]	ǀǎni [ha/hi -] [pr n]	ǀǀǀǎi (biting sp.)			

Table [VI]6. Pattern Type I.3: l~ll. This cross-SAK pattern is seen internally within JU; Khoekhoe KHOE; Kalahari KHOE; and S1-S2 of !UI (ǀXam and ǀDl!-!ke).

Table 5. e I.3.			Proto-KHOE (Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKaK, EKaK)	JU	TAA	!UI	!UI	
	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKaK; PWK, PEK	Ju'hoan	!Xóó	[Xam	#Kho-mani	N uu
				l	ll			l~ll	l, ll			
J-int	I.3(1)	awl, needle						g xǎi [S]; g xáng [C];  xáng, llxáng,  xáni [N]				
nal	I.3(2)	age-mate								[kē:ŋ, llkǎñi [S1]		[qəi [N uu]
	I.3(3)	visit away		(sári)	x'áé 'visitor, stranger' [Nar]	llgaie 'visit'		[kx'áèà [vr]; ll'áèà [vr] (loan?)	[kx'áè			
ed s?, C	I.3(4)	pale yellow, green, blue (vaal)		hǎi 'green, fresh' [Nama];  hai ~  nai [!Ora]	llhǎi [Khwe]; tsai [Nar-Vi]; tsǎá [Nar-Vi]	chabe		hài [vi] 'green, young'	[gǎhi , dzái	[kainja 'yellow' [S1]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
	I.3(5)	NEG BE at, be absent		khai 'be absent' [stative];  xai-sa 'gone out, absent' [!Ora]	ǀai 'far away' [Nar]; ? (txáa-can) [Khwe]			? (#áán)	qái ('away, absent'); tái			
	I.3(6)	stomach (innards)		ani-b [  gani-b] [Hm]	nǀáá [Nar]		* na (PKaIK, PWK), * a (PEK)		khân			
ial, ed?	I.3(7)	beads				khai-e 'string of'		g xân [hi/hi -] (glass); zaq'in [zǎ'i [Sn]] [ka/ka -si] (copper)	#qhân-tê [èh] (string of); #kx'ái [ih](copper)	kx'e: [S2];  k'wəri [S1]	kx'éi-sí 'beads' [Do]	
	I.3(8)	expand, increase, add to, spread		?'ārǀ [  aro]	ǀàù		*  xau 'aus- breiten' [PWK], *  āu [PEK]	ǀaoh [vt/i]	ǀáho kV			
L.1(14)	I.3(9)	snake	* x'ao [PK, PKK]	?'ǎǀ-b [  ao-b]  kx'ao [!Ora]	x'ao (gen.) [Nar];  x'ǎo (sp.) [Nar]	gao;   gao	* x'ao [PKaIK; PWK], *?'ao [PEK]	ǀabu [ha/hi] 'mamba' [Sn]; pǎbù [ha/hi] 'puff- adder' [Sn]		k'au [S2]	kx'áu [Do]	
EC	I.3(10)	bad, ugly			zàù 'evil' [Nar]	kao		kx'ǎù [vi]			gau [Ma]	

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe, Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóó	Xam	#Kho- mani	N uu
	I.3(11)	blood	* ʔao [PK]	ʔáò-b [  ao-b]	ʔáò [Nar]		* ʔáò [PKalK; PWK,PEK]			lxau-kn [S1]		
nal; Z nal	I.3(12)	love, like	* am [PK], * am [PKK]	nǎm	nǎm	gam “love, covet”	* nam [* am] [PKalK; PWK]; *  am[PEK]	nǎm [vt]	nám kV; tsǎha kV (cf. Swati - <i>tsándza</i> )	kǎŋ-a [S1];  laŋ [S2]		ts'a <sup>n</sup> a <sup>n</sup> [N uu]
nal ertain eries)	I.3(13)	warm self		ǎmǎmèn-;  ǎmǎ-bèñ; [  gam-]   ʔámǎ-bèñ [ lama-]	ʔǎé-  ʔǎé ‘bec. warm’ [Nar];  tshǎǎ	tsa		ǎ-  ǎ [vt]	qháǎ [  qhaV]	kara ‘bask’[S1]		
I(12)	I.3(14)	sun, day			ámí (sun, day, be thirsty’) [Nar]	kam;   gham ‘sun, light’	* ámí [PKalK; PWK, PEK]	ám [ha/ha -] ‘sun, day, thirst’	ʔán [ǎh/ǎh   ʔána-té]‘sun, day, thirst’			
	I.3(15)	urinate	* xam [PK]	khǎm	xámí [Nar]		* xam [PKalK; PWK,PEK]	g xám [vt]	qháa			
ana  lhapò n. eanse’ Xhosa hamo	I.3(16)	urine	* xam			kham	* xam [PKalK; PWK, PEK]	g xám [ka/ka -si]	qhám [ǎh/ǎh - tê]			



	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PwK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
	I.3(17)	side, edge, face		khǎá-b	? (káá “finishing point” [Nar])			gǎ'á [ka/ka – si]	llqháa #ǎē [ǎh/ǎh llqháa #áma-té] (of spear); sǎ'ǎ (of axe)			

in Table [VI]7. Pattern Type I.4: |~!

Table [7]. Type I.5:			Proto-KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKaK, EKaK)	JU	TAA	!UI	!UI	
es	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PwK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
				!				ǀ, ǁ	!			
-TUU, C	I.4(1)	give		khǎē	khǎá (gene- rously)	thee		?ǎn	!qháǎ;  na [TG- 'Dative']	ǎ [  Xam],  ka: [S1]		ǎ'n 'share' [N uu]
n in hoan?]	I.4(2)	throw, hurl		nǎmǐ				nǎmǐ [vt]	!gǎhm	!gabε-tǎn [S1]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PwK, PEK	Ju!hoan	!Xóǀ	!Xam	#Kho- mani	N!uu
				l				!				
	I.4(3)	spotted			[x'ubu- x'ubu- xa [ <i>adj</i> ] [Nar]			g!xòm [vi]; g!xòm [S]; g!xòm [C]; !xòmì, !hòm [N]				
ekhoe nal	I.4(4)	sprout, flower, bloom [n]		uru-b/s [  guru-]; hai-!nuru-s	nubu (of tree) [Nar]			n!ù'ùbù [ka/ka -si]	ǀqhùm			
	cf. I.4(4) above.	(to) sprout, flower, bloom.			!ǀóm' ~ tsòm 'germinate' [Nar]; tcòm [Khwe]; khúvi [Khwe];  quvù- [Khwe]	khubi 'to flower'	*tsòm 'ger- minate, sprout' [PKaK; PEK]; *tsòm [PwK]	n!ù'ùbù [vi][Di]; gò 'flower, bloom'; !x'ùbù 'resprout' [Sn]; n!òm 'resprout' [Sn]; !ǀómì 'germinate' [Sn]; hòó 'bear fruit'	llqòbe; nllom; tshǀhm 'flower [v]'			
	I.4(5)	tear, rip		kháú 'tear'; #náú-!áá 'break thr. (of sun)'	!xàbe [vt]; !xai [vi]			lláq'in [vi] (also break e.g. of dawn)	!nǎhu [!nǎhBV] 'tear, split, rip'	!kwara; !kuru [S1]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju'hoan	!Xóǿ	Xam	#Kho- mani	N uu
	I.4(6)	pour out, flow		[ʔáũ [vi]   [au] [ 'trickle', ʔáũn [  ãu] 'ooze'; dãũn [dãu][Hm] 'flow'; nãũn [nãu] [Hm] 'flow'				!áú 'flow'	dzãũ kV 'bleed'			
C	I.4(7)	red-brown		[ʔáwã [  apa] ( lgani) [N];  kx'aba [!Ora]	n#ãm [Nar]			g!áãn 'red' [vi]	ãhŋa	(n- kx'aba 'horse' [#Un] [loan?])		
	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju'hoan	!Xóǿ	Xam	#Kho- mani	[N uu]
e-khoe nal. C. words confl. s for '	I.4(8)	roan, dun, chestnut, (blue-grey)		oa ~ !oa [!Ora]	n uà, n ǒá [Nar-Ba], n ǒà 'red' [Nar-Vi]		* noa 'red, brown' [PKaIK; PWK]		l nǒhba, ǒhba	( hoa:ka 'black, dark blue' [S1]; (n-!oã (of horse) [#Un] [loan?])	(!kubà [Do])	
	I.4(9)	stomach (innards), cf. liver		ani-b [  gani-b] [Hm]				n!áng [ka/ka] (inside)	l kx'ân [èh/ àh]	l nairj 'liver' [S2]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	I!ie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
	cf. I.V.3(1)	heart						!kx'á [ka/ka -si]	q'an [ǎh/ǎh  q'áǎ]	ĩ: [S1];  ge:,  gǎĩ [S2]		
	cf. I.4(9)	liver, cf. heart; insides	*kx'ǎĩ [PK, PKK]		kx'ǎé		*kx'ǎĩ [PKalK; PWK], *k'ǎĩ [PEK]					
ginal; I- [AA] ʔ]	I.4(10)	gemsbok		ǎé-b [  gae-b]				(!ǎé-kx'o [ha/hi -si]) [!ǎé = 'hunt']	llǎ'he [èh]			ǎe 'spring -buck' [N uu]
C	I.4(11)	die, be dead, NEG BE, 'departed'		khǎĩ,  khàwĩ (rare)	háǎ [Nar]; káǎ (dead);			!ái [vi, sg subj !àǀ pl subj]	!ʔǎa	a:		

Table [VI]8. Pattern Type II.2: †~l

Table			Proto-KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA-HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
8.	no	gloss	PK: PKK	Nama, Dama †; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju!’hoan	!Xóǿ	[Xam	†Kho- mani	N]uu
				†				l	l			
C	II.2(1)	black, dark night	*†Nu [PK] ‘black’: *†u [PKK]	†nuü [N]; †nu~!nu [!Ora]	n†úú ‘dark, night’ [Nar]; n†gú(-kyao) ‘be dark’ [Khwe]	ju(nye) ‘dark- ness’	*†nu (*†u) [PKalK; PWK], *†nju [PEK]	(n†ú [adj]; jó [vi]) [loans?]	[n]ye ‘night’	? (_!ho [S1]), ? (!kǿǿ [S2])		
2. tablet U	II.2(2)	springhare ( <i>tsoro</i> )		†ǿǿ-b [†gǿ-b]	g†ǿǿ [Nar]	joo	*†ǿ [PKalK; PWK]	nǿǿm [ha/hi -]; (g†ǿǿ [ha/hi -] [loan?])	[n]yi [ih/úh  n]ya- tǿ]			
	II.2(3)	sew		†’óm̃ [†om]; †’om [!Ora]					[]ya (lǿV)	†Λm [S1]; [kxama [S2]		
	II.2(4)	dance (women)	*†na [PK, PKK]	†nǿǿ-s			*†na (*†a) [PWKalK]	nǿǿmm [vi]; nǿǿm̃ [S]; nǿǿm̃ [C]	[nǿǿ]m	†na: [S1];		
	II.2(5)	pour out, flow			n†ǿǿá	thaka; [khana ho ‘to bleed’		nǿǿhng [vi] ‘leak’		(†aŋ [S2])		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju!hoan	!Xóǀ	Xam	#Kho- mani	N uu
UU	II.2(6)	eye (supposedly linked to 'awake')	*#xai	(müür-s)			*#xai (PKaK), *#xái (PWK), *cxai (PEK)	glá'a [ka/ka -si]	(!üǀ)	ts'axá-u [sg], ts'a-xá-i- ton ~ ts'a- ts'á-xu- kən [pl] [S1]	ts'axám [Do]; ts'a-xu-ke [pl] [Ma]	
	II.2(7)	tip, point, edge, top	*#ʔam (top, 'Oberseite') [PK, PKK]	#ʔám [ʔam] 'over';  ([ʔám-mi/s [am-mi] 'edge'; ʔám-s [am-s] 'mouth')	[ʔam 'point (e.g. of thorn) [Nar]; gyam 'side, edge'[Khwe]; kx'ám 'top edge, surface; mouth' [Khwe]	[gam 'point, side'	*#ʔam [PKaK; PWK], *ʔyam [PEK]		[ʔám [ǎh/ǎh [ʔama-ni/-tê];	[ɛm: ( e- emmi [pl]) [S1]		
tial)	II.2(8)	age-mate			#ára					[kɛ:ŋ, llkãri [S1]		
	II.2(9)	fat, marrow, grease, oil, exudation, honey	*#ai (*#ae) 'marrow, fruit pulp' [PK, PKK]	#ǎé-b [ʔgae-b] 'marrow'	#ǎè 'marrow' [Nar]		(*#ai [*#ae]) 'marrow, fruit pulp' [PKaK]	n ái 'fat, oil' [ka/ka];  llà'a 'marrow' [ka/ka]	sáni [> sini] [ǎh/ǎh] 'glandular excretion'; sǎǎ [ǎh/ǎh] 'fat, marrow, oil, honey'			
	II.2(10)	face (> 'surface', sole)	(*kx'ai [PK])	#ʔái-b [ʔai-b]			(*kx'ai [PWK], *k'ai [PEK])	[kx'ái    x'ái [Sn]] [ka/ka -si]	(tǎhi 'sole')			

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	ǂKho- mani	N uu]
C	II.2(11)	small, narrow, thin		ǂkharǀ [N]	x'aré [Nar]			ts'è-mà [Ju 'hoan], tš'è-mà [!Xúŋ-C], ts'è-mà, tš'è- mà, ts'èrè-mà [!Xúŋ-N]	[kari [S6]	ǂèri, ts'ere, ǂeni [S1], ǂenni [  Xam], [kxre [S2]		
	II.2(12)	sweet		ǂkhèñ [N]		(eye)		nǀà'ng [vi]; (taq'in)		(a:kn [S1])		

Table [VI]9. Pattern Type II.3: ǂ ~ ll ~ (|).

no	gloss	PK: PKK	Proto-KHOE (Khoe: Khoe-khoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKalK, EkalK)	JU	TAA	!UI	!UI
II.3(1)	pull			ǂ	ǂ	che		ll, ǂ	ll, ǂ	l, ll	
II.3(3)	arm, forearm			ǂ(ǂ háǎn-b)	tshǎu [Khwe]		*tshau [PKalK]	gǂàqò [ka/ka -si]	llnǎho [ǎh/ǎh -tê] 'lower arm'		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
	II.3(4)	winter, cold		sǎǎ	sao 'winter' [Nar]			#ǎ'ú [ <i>adj</i> ]	llǎ'ũ 'cold'	ʃ'ao <sup>q</sup> 'cold, winter' [ [Xam]		
B ba; ba	II.3(5)	mix (e.g. food)		#ǒwé [#gobe]; xóm-xom (“mix up w. sand”)	#xòm		*#xom [PKalK;P WK]; *cxom [PEK]	#xóm [ <i>vt</i> ]; #kx'úmi; dòq'm	#kx'úmi sV	hwei-tǎn llkói-tě [S1]		
	II.3(6)	lack, be short of, want		#hǎǎn				#ǎǎ [Sn]	?#nǎhǎ	llka [S1]; llkau [S2]; twa [S2]		
C	cf. II.3(6)	WANT, desire		#ao[#gao] [AUX][stative]	#áo 'want' [Nar, Xanagas var.]; n#ǎ [Khwe]			n#hao [Sn] (in compound)	#áo kV 'long for', #ǎn-sí 'wish'	#kaò-wa [ [Xam]		



Table [VI]10. Pattern Type II.4: ʃ ~ !.

Table 10. II.4:			Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EkalK)	JU	TAA	!UI	!UI	
	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju!hoan	!Xóǿ	Xam	#Kho-mani	N uu
				ʃ	ʃ			ʃ ~ !	!			
Uint [ɰ]	II.4(1)	break soil (of germ-inating seed)						gʃx'úi [S]; ʃx'úi [C]; ʃx'úi, !'húi [N]				
Uint [ɰ]	II.4(2)	hook [n]						n!'hám [S]; n#hám [N]				
	II.4(3)	throw at, shoot, hit, strike		ʃnǿà	n#ǿà			n!o'àn [vt]				
	II.4(4)	enter, insert	PK *ʃā	ʃāà [ʃgā]	(V +) ʃāà [Nar]; ʃāā [Khwe]			g!á'ámá	ǰlu [sg] (ǰLV), !gá'o [pl]	!e:	ʔ'ee [N uu]	
Uint, C	II.3(5)	great, big			ʃnǿbè [Nar-Vi]			n!ā'a [Ju!hoan], !na:a 'fat' [N1] n!ā'a, nllā'a [!Xǹ-C], nllā'a	'llnāhā 'be fat' [!Xóǿ]			

	no	gloss	PK: PKK	Nama, Dama +, !Ora	Khwe, Naro	Hie- Chware	PKalK; PWK, PEK	[!Xũŋ-N] Ju 'hoan	!Xóð	Xam	#Kho- mani	N uu
	II.4(6)	salt(y)	PKK *!ʔu (‘salt’)	#ʔòð-xǎ [ʔò-xa] [Nama]; #kx'o-xa-sa, !ʔũ-!ʔũ-sa [!Ora]				n#qi‘salty’ [Ju 'hoan]	!nɔb ‘salt’ [S6]	ʔko: ‘salt’ [S1]		#χ'oo [N uu]
	II.4(7)	knife		(!ʔóð-s [!ð-s] ‘axe’)		kagho		#oð#oð [ha/ha -si]	!ðo [ǎh/ǎh #nũn]			
				#	!							
	II.4(8)	shave, trim		#khòm	g!òm [Nar]			#hóm [v] [Sn]	#xùm			
	II.4(9)	stick to		#ʔǎwé [ʔabe] ‘sit glued to’	(!ʔám-!ʔám ‘sticky’)			#ʔámá ‘adhering to’	dt'kx'ába kV			
C	II.4(10)	KNOW	PK * #ʔam	#ʔán [ʔan, ʔái] [stat.]	!ʔáa [Nar]; ǎ [Khwe]					#enna ‘be conscious’		
				#	ll			#				
C	II.4(11)	thin, hollow, lean (may also > hungry)		#ǎwá [ʔgaba- sa] [Nama]	gllaba [Nar- Ba]			g#am ‘scrawny’ [Sn]; žam [Sn] HH-JU- TAA	#ʔába [sg], 'ǎð [pl], dzǎba-tá HH-JU-TAA			
C	II.4(12)	emerge, wake up, rise		#khái	llʔari-se [Nar]			#xái [v]	#èè [v]			

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe, Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
	II.4.(13)	scorpion		#khǎi-b; khâi		llkadi	*llxʔadi [PkalK]; *llxʔadi [PWK], *llʔadi [PEK]	g#xâi [ha/hi -]	llâē [èh/âh llâma-tê] (gen.)			

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Table [VI]11. Pattern Type III.4: ʘ ~ ʘ

Example			Proto-KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
	no	gloss	PK: PKK	Nama, Dama +, !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju!hoan	!Xóó	!Xam	#Kho- mani	N uu
				(ʘ)	ʘ			ʘ	ʘ, ʘ			
	III.4(1)	peel, moult, slough [vi]			ʘx'óá [v];  tsóá [v]			gʘxóm̩ 'moult' [Sn]; ʘhóbá [Sn] 'peel, moult'; tsoaq 'moult' [Di]; ʘhòè 'moult' [Di]				
	III.4(2)	greet				ʘghoma- kho			ʘgùm-ʘgùm kV			
Example ma k'; ma e'	III.4(3)	smile, kiss		ʘ?óá [ʘloa] 'kiss'; [nóm 'smile'		ʘgoma	*[numa [PEK] 'kiss'	ʘ?ómá [vi] 'kiss'; zoma [vi] 'smile'	(ʘ?úmā 'kiss') [loan?]			
	III.4(4)	man, male (e.g. of sp.)			ʘlòò (bull); gùu xoo 'ram'	ʘlkhowe;  chowe		ʘoqè [ha/si – si]; -g!oq [sg]		!go: [S2];  dɔ [S2]	ʘko: [Ma]	ʘoo [N uu]

								-nllaqè [pl]				
	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóð	[Xam	#Kho- mani	N uu
	III.4(5)	pangolin (scaly anteater)		llkhò-mi				n#hòqi [ha/hi -]	llgū'm [èh/àh llgū'm-sā/ llgū'm sàna-tê]			
	III.4(6)	crow		ll'hóará-b [N]; gǒrá-b	hǒara [Nar]	kola-kola (white- necked)		n#òàqrà [ha/hi -si] [not in Sn]; (cf. !oaqrà [ha/hi -] 'hawk')	llnòha-là [àh/àh -tê]	llgwa: (black) [S2]		
	III.4(7)	shoot (acquire target) 'raakskiet'			llao		*llao [PKaIK; PWK], *lláo [PEK]	#áo [Sn]	#'áa [#'aV] [sg]; llnùm [pl]	llkãu [S2]		
	III.4(8)	strike, hit			llx'ám [Nar]; llábá [Nar]; llx'ám- [Khwe]; (#ám [Nar])		*llx'am 'schlagen' [PKaIK]; *ll'am [PEK], *llx'ám [PWK]	n#á'm		[kama [S2]	#gám [Do], #kamV 'beat' [Ma]	
UU	III.4(9)	female child, girl			gllæe (lóa)			#xàè [ha/si -sin]		(O'pwa)- xai 'daughter' [S1]	(O'wa)-xai [Ma]	

n Table [VI]12. Pattern Type III.3: ll ~ !

Table 12. e 3: !			Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKaK, EKaK)	JU	TAA	!UI	!UI
s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKaK; PWK, PEK	Ju!hoan	!Xóò	Xam	‡Kho-mani  N uu
				(ll)	ll			!			
op er'	III.3(1)	scrape out		llkhòm	llòbe [Nar]; ‡x'oe [Nar]; dōe [Nar]			n!òqe [v] 'scoop out contents' [Sn]	llhóbe kV 'take out sand'	k'ó:e [S1]	
	III.3(2)	open (e.g. tin)	*llxoba [PK, PKK]	khòwá; llkhòwá	kxóá [Nar]; llxòbe		*llxobe, *llxode [PKaK], *llxode [PEK]	!oahm [v]	lló'a tV [sg] llgù'be [pl]		
	III.3(3)	nail (of hand, foot); horn	(*llodo) [PK], *lloro [PKK]	llórò- [llgoro-b/s] ‡hùrù-b 'kudu horn, trumpet'	llorò	(!khole 'claw')	(*llodo) [PKaK; PEK];	!ù'uru [ka/ka -si] [Sn]	llqùle [èh/àh, pl llqûn-sâ, dim llqùlu-bâ],	llkuru [sg], llkullku-tən [S1]; llkoro 'horns' [Xam] llkuri [sg], llkuro-ke [pl] [S2]	llkoro-si [sg], llkoro-ke [pl] [Ma] 'nail'
ial	III.3(4)	thunder [n]				llghari		g!ádiih [ka/ka -]	(llkha:ni e _!kòru [S5])		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKa!K; PWK, PEK	Ju!’hoan	!Xóǒ	Xam	‡Kho- mani	N uu
l		wing		llǎwò-b [llgabo-b]	?(‡xámá [Nar])	(llkabaa)		n!ābù [ka/ka- si] [Sn]				
e’, l	III.3(5)	growl		llààn [llgâ]				?(g!aq’m- g!a’m)	!nǎ/ma [!naV] ‘snore, growl at’			
l	III.3(6)	cheek		(xóó-b)	g!lóm (cheek, side) [Nar]			!ǒm̄m [Sn]				
l	III.3(7)	river		dǒm-mi [Hm]	dòm (r.bed, gully)		*llxom ‘river – perennial’ [PKa!K; PEK]; *llxóm [PWK]	!xòm [ha/ha- si]; dǒhm [ha/ha] ‘dry bed’				
int.	III.3(8)	short		(!nuwu [Nama];) ‡?ubu, !nubu [!Ora]	llòm [Nar], llóm [Khwe]		PKa!l *llom	!òmà [Sn]				
	III.3(9)	hunger, have hunger		(!ʔààn [!â])	llàbà ‘be hungry’ [Nar] llàbà ‘hunger’ [Nar]; ‡hǎwà ‘be hungry’ [Nar]	llkaba ‘hunger’; llgaba ‘famine’		!ʔán [adj] ‘be hungry’; llàbè ‘be hungry’	llàhba [èh] ‘hunger’	llk’wā: ‘hunger’ [S1]; k’wǎi [S2]		

	no	gloss	PK: PKK	Nama, Dama +, !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóõ	[Xam	#Kho- mani	N uu
C, ginal	III.3(10); cf. III.3(	go over, step over			llábú (rise) [Nar]; #xába [Nar]			ll'ábà	llcà'bu kâ; !kx'áa [!kx'aV] 'surpass'	llkau 'over, on' [S1]		
U-int	III.3(11); cf. II.4(2)	hook (vt)		llàwè [vt] [llgabe]			n!hám [vt] [Di]; ll'hám 'to hook' [Sn] [N]					
U-int	III.3(12)	rain, drizzle, spit		llàõ [llgao] [vt] 'rain slanting rain'	nllào 'rainy season' [Nar]		g!à [S]; gllà [C]; gllà [N];  g!áú [ka/ka -si] 'drop of rain'	lgáũ- gáũ 'spit, drizzle';  dts'kx'áu- dts'kx'áu;  sáũ (lâa) 'fall (of first rains)'				
	III.3(13)	dress, wear, put on foot- wear		ll'hãró, ll'hãbó [vt]	nllàbo; kxàbà ("< Tsw., 'wear sthg new, look nice")			gllábà [vt]	!gá'o [!ga'BV] 'put on shoes'			
OE-	III.3(14)	sinew, vein, cord	*ll'aba	ll'áwà-b [llapa-b]	ll'ábà 'sinew' [Nar];  !x'ái 'vein' [Nar]	!kaba 'tendon'; llkaba 'thread, <i>riempie</i> '; llgadi 'sinew'	*ll'aba [PKaK; PEK], *ll'ábà [PWK]		!gāba [ãh/ãh, !gām-tê] (of neck)	( kari [S1])		



	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǿ	Xam	#Kho- mani	N uu
al	III.3(15)	snail		llkháán-xàè-s [llkhâxae]					!qhán [iʰ/ùʰ !qhàna-tê]			
C	III.3(16)	same		llkhā		llxa- 'another (same)'			? (!gāʰn'ń)	ka- [!Xam]		
C	III.3(17)	leave, leave alone, behind		llnāā [llnā] [N]; llhāán [llhā] [D]	!aù; llxaò 'infant at home'			nllah [vt]; llxàùn 'leave behind'	!āo kV 'leave behind, remain'; llxāo 'infant at home'; '#náʰn tâ [ ' #nahn tV] 'leave alone'	ka 'alone' [S1];  hí: 'alone' [S1]		
C	III.3(18)	go/ step over, upward, across			llábú 'rise' [Nar]			ll'ábà	llGá'bu ká	khábbu-ķen [S1]		
				ll	ll			ll	ll	!		
OE- TAA	III.3(19)	shake, agitate	*llubu [PK, PKK]	llnūwú	nllùbu; kqaba-kqaba 'shake out'		*llnubu (*llubu) [PKalK; PWK, PEK]	nllubù [vt]	llnūhbu- llnūhbu; llGóbu-llGôbu kV; gq̄hba kV	!ku-!ku [S1]; xu-tən [S1]		
	III.3(20)	bull		llǿǿ-b [llgō-b] 'bull'	ǿ-nllgo [Khwe] 'wildebeest bull'			ll'huù [ha/hi -] [pr.n] 'lone blue wildebeest'		!nu: [S1] 'blue wilde- beest'		

no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóǿ	Xam	#Kho- mani	N uu
III.3(22)	tortoise sp.			gllòé 'leopard t.'		* Joe [PKaK; PWK, PEK]	gllòé [ha/hi -] [Sn] (large sp.) [loan?]	llnúe [èh/ǎh]	!go:e [S1]		!go <sup>97</sup> ei <sup>9</sup> 'sand t.' [Do]
III.3(23)	tie up, catch		ll'háũ 'catch, ensnare'				ll'àng [vt/i]	llxáu kV [vt] 'snare'	!xau-ka [S1]		
III.3(24)	hartbees		llkhàmà-b 'red'	llxamà	llkama		llxamà [ha/hi -] [Sn]	llgà'ǎ	!k'wǎ [S1]		
III.3(25)	bec. satisfied, replete		ll'áá [llâ]	llx'ǎǎ [Nar]	llga	*llx'a [PKaK]	llká [vi]		!kauε:-nja [S1]		
III.3(26)	scorpion (2)		llkhana						!kana [S1]; #kara [S1]; !kəna: [S2]		
III.3(27)	much, all, great			kari-si [C1]				lláli >[llát:i]	!kerri, !ké-!ke-ttən (pl) [  Xam], !atē [#Uŋ]		
III.3(28)	time, hour, day		ll'ǎé-b [llae-b]	ll'aè			ll'aè [ka/ka - si]	ll'an 'day'	llk'e: [S1]; !xan-se [S2]		

Table [VI]13. Pattern Type IV.3: ! ~ (!) ~ †.

ble 3.			Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
	no	gloss	PK: PKK	Nama, Dama †; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	‡Kho-mani	N uu
				!				!	, ‡			
mal	I.V.3(1)	stomach (innards), cf. heart	(*!a [PKK])	!nǎǎ-b	n ǎǎ [Nar]		*!na (PKalK, PWK), *!a (PEK)					
	cf. I.V.3(1)	heart						!kx'á [ka/ka -si]	q'ǎn [ǎh/ǎh  q'ǎǎ]	!ĩ: [S1];  ge:,  gǎĩ [S2]		
				!	‡	?		!	(‡)	(!)		
	IV.3(2)	spy out, look for; but see below:		!áwǎ [!gapa] 'look'	n‡ǎǎ 'look around'; (!aa-!aa)			n!ahm [vt]	‡Gǎh'ǎ		lla <sup>n</sup> a <sup>n</sup> 'look for' [N uu]	
TUU	cf. IV.3(2)	see, perceive, cf look at							nǎǎ kV	ni:,  na: [S1]		
JU-	IV.3(3)	elbow		!ʔǎní-b [!uni-b]	‡hǒne [Nar]	chuni	*‡huni [PkalK]	!húru [ka/ka -si]; (‡húni [ka/ka -si] [loan?])	g‡qhúli  nǎn [ǎh g‡qhúla-té  nǎǎ]; g‡xúbi [ǎh/ǎh]	!xǒru-!xǒru tu [S1]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju!'hoan	!Xóð	Xam	#Kho- mani	N uu
AA]	IV.3(4)	egg		!ʔùwú-s [!upu- s]	#ʔubi [Nar]; g#úí 'rotten, of unhatched, bad eggs' [Nar]		*#ʔubi [PKaIK]; *#ʔúbí [PWK], *#ʔyubi [PEK]	n!ù [ka/ka - si];  ds'ùu [ka/ka -si] 'ostrich- egg' [Sn])	#gúā [ãh e/u], #gūhi [ih/ùh #gūha-te] ( 'bad' ); #úũ [ih/ùh #úā-tê] ( 'empty ostrich' )	!kauĩ [sg], !kwi:tn [pl] [S1]	#ui 'eggs' [N uu]	
C	IV.3(5)	good, right	PK(K) *!āi	!áin [!gāi] [Nama]; !āĩ [!Ora]	!āĩ [Nar-Ba], kyāĩ [Khwe], kxāè- kxāè [Nar-Vi]		PKaI *!āi	!āisi [Sn], kāi, kīĩ [!Xūŋ-C], kāi [!Xūŋ-N]	qái [!Xóð], #kāi [ !'Auo]	'wai:i [S1]		
C, I	IV.3(6)	bitter, salty, be, cf sour						g!ā'an [vi]	#qân			

n Table [VI]14. Pattern Type IV.2: !~ll.

able [14. e 2: !~ll			Proto-KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto- KHOE (Kalahari; WkaK, EKaK)	JU	TAA	!UI	!UI	
	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju!hoan	!Xóǝ	Xam	#Kho- mani	N uu
				!	!			!	ll	ll		
	IV.2(1)	whip, sjambok		!nǎwǎ-b [!naba-b]	n!abǎ			n!ǎbǎ [ha/ha -si] [loan?]	llǎm [ih/ùh llǎma-tǎ]			
	cf. IV.2(1)	rhinoceros 'white, (Breitmaul)'	*!aba [PK, PKK]	!nǎwǎ-		gaba	*!nǎbǎ [PKaK]; *ǎgǎbǎ [PEK]					
ns?	IV.2(2)	cattle-post						!amah [ka/ka -si]	llama [ǎh/ǎh tǎ ]'kraal'			
	IV.2(3)	sew, knit (cf 'awl', pierce'	*!xan(i) [PK]		!xǎe [Nar]; xǎn [Khwe]		*!xan(i) [PKaK; PWK]; *xan [PEK]	g!ái [vǎ]		llǎ:ǎ, llkǎǎ [S2]		
	IV.2(4)	pierce	(*!hae) [PK]	!khǎǎ	!hǎe [Nar]		*!hae [PKaK; PWK]; *khǎé [PEK]			llke:n, llkein [S1]		
	IV.2(5)	kick		!ái [!gai]	!ái [Nar]			!aih [vǎ] [loan?]		llgabitǎn [S1]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
TUU	IV.2(6)	leopard			!ʔóè	uwe	*!ʔue (*!ʔoe) [PKaK]; *!ʔúè (*!ʔóè) [PWK]; *ʔue (*ʔoe) [PEK]	ʔ	(  ùì [iʰ/ ùʰ   ùà-tê])	kwe: (‘cheetah’) [S2]		
C, al; e- int.	IV.2(7)	thick		!náú [N] !ʔàù [  au] [N]	tsáú [Nar], cáo ‘be broad’ [Khwe]					kx'au [#Uŋ]		
				!	(  )					!		
C	IV.2(8)	invert (i)		!khupu	ùbu [Nar]				ùhu kV ‘overturn’,   ùhu (ká   'áma)	!nwobbo ‘stir, twirl stick’		
	IV.2(9)	invert (ii)		!khuni	(!x'uri [Nar]; kx'úni-(na- ngyévi) [Khwe])			n  huri		!xwǀnni, !xwǀri		
al	IV.2(10)	work, earn		!ʔóá [!oa]				kx'óá [vʔ]		(_tǀba [S1])		
	IV.2(11)	bee, honey		!ḥāwú-b				ǎowā [hi/hi -] ‘bee, honey’ [Sn]		!kau ‘honey’ [S2]	#kau ‘honey’ [Do]	

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǒ	Xam	‡Kho- mani	N uu
C	IV.2(12)	yellow, brown		!náǎ-b 'red ochre'	llxau [Nar- Ba]			llgǎǎ [N3]; gǎ'u [Ju 'hoan]; tšáo, tšxau [!Xǔǔ-N]	llgá'u (ká)			
s in [AA?]	IV.2(13)	garden, field; kraal	*!hana 'enclosure' [PKK]; *!hada [PKK] 'thorn kraal'	!hánǎ-b, !hǎrá-s	llhárá	llgala "court- yard"; karaa	*!lhada [PXX]; *kada [PKalK; PEK]	llxàrá [ka/ka -si]	llqhála [èh/ èh -tè]			
				l, (l)	(ll)	?(l)		ll	ll, l	l, ‡		
	IV.2(14)	shine		!náǎn [!ná]		llkhaie;  khaa		ll?ǎn	llgǎa ('glow (of lion's eyes)')	kǎǎ; ‡xi: [S1]		
	IV.2(16)	take, catch, hold	*!xo [PK, PKK]	!khóó	hòó 'find, get, receive' [Nar]	llkhoo 'gather, take by force' chu 'acquire'; ghoo 'catch, seize"	*!xo [PKalK; PWK], *xo [PEK];  * o [PKalK]	gù [sg <i>obj</i> ] ǎ hui [pl <i>obj</i> ]	llgùu-llgùu; llgùì-llgùì; kx'úi [kx'uV];   òho	ho: 'take' [S1]	hoo [N uu]	
l, e)		snore			!xonó [Nar]; xúnú [Khwe]			g!xùní	Gòlo 'growl'			

**TABLES for Chapter VI.** TABLES [VI]15a and b; [VI]16-19. Patterns of Type 'X'. (The Type 'X' patterns are so named because the value for the consonant varies, being sometimes a click, 'Q', and sometimes a non-click consonant, 'C(C)').

**in Table [VI]15a and b.** Pattern Type X.1 C(C) ~ C(C). A partial Type X pattern (sub-type .1) showing non-click consonants in patterns *mainly* with other non-click consonants. The stems in Tables 1a and 1b below chiefly illustrate stems with initial alveolar or palatal stops, fricatives or affricates.

**in Table [VI]15a.** Pattern Type X.1 C ~ C(C). The C<sub>1</sub> segments in Table 15a are almost all *simple* oral or nasal stops, with only occasional affricate alternants. It is a notable feature of these 'simple' stops that they are almost all alveolar. Very few examples of labial and velar initials could be found; and there are no palatals.

es.

Several of these are words that were found by Vossen (1997) to be reconstructible for Proto-KHOE or one of its sub-branches. Some of them have in addition a *cross-SAK* distribution, and a few (marked 'AT1' or 'AT2') having been previously proposed as cross-SAK items by Traill (1986b); while others (marked 'HH-JU-TAA') were identified as systematic members of the HH-JU-TAA series by Honken (1998).

The table also reveals - if only to a limited extent in this initially simplified presentation - that many of these words pattern furthermore with *click*-initial stems, either in *cross-SAK* or in a subgroup *internal* series.

The notes in the far left-hand column indicate the Bantu-like affinities of some of the C(C)-initial forms.

in Table [VI]15a. Type X.1: C(C).			Proto-KHOE (Khoe: Khoe- khoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
es	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju!hoan	!Xóǝ	[Xam	ǂKho- mani	N uu
<b>BIALS</b>												
*-mòka [ABCFHJ]; ódia [LM]	X.1(1)	bark, bay		hūhū			*bū [PWK, PEK]			borro	!ko!ǝ [Do] 'roar, brom'	ba'oǝ, ma'oǝ [N uu]
	X.1(2)	run, flee	*be [PK]	bèé			*be [PWK, PEK]			ba: <sup>q</sup> i 'race, chase'		



	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóó	[Xam	#Kho- mani	N uu
UU, páa. y -pa; na -ntsha; -naea	X.1(3)	give	*ma [PK: PKK]	mǎà(n) [mā];  khǎě	kháà [Nar]			ʔǎ [  ʔǎn]	!qháǎ [!qhaV]	[ka: [S1], ǎ [  Xam]	ʎaʼn 'share, offer' [N uu]	
bóna, na [BDHKLMR].	X.1(4)	see, behold		mǔ̀m[mû]	(máà) [Nar]; mǔ̀ [Khwe]		*mũ [PKaK]					
juna.	X.1(5)	stand, rise		mǎán [mā]	(téé) [Nar]; (tán, tǎi) [Khwe]			bārā 'rise, stand up, of hair' [Sn]		baʳa 'erect hair, quills'		
páapa. na -kaba [k'aba]; -mema; -beba on back'; nga -famba on (horse)'	X.1(6)	carry, ride on back	*ʔaba [PK: PKK]	ʔáwǎ	ábǎ [Nar];  nǎma (unsupported) [Nar]; pǎpǎ [Nar]	aba 'carry over shoulder'	*ʔaba [PKaK; PWK, PEK]	mǎ'ǎ [S]; mǎ'ǎ [C]; mǎmǎ [N]	[ǎm kV 'carry child on back'		!ʔaβa	
u(lu) bala 'open no trees'	X.1(7)	wide, broad (be)			tsǎra #aa 'open space in veld' [Nar]					bara-bara 'flat'	(#ʔaa 'open veld' [N uu])	
bádǎa 'burn, bec. ' [EMNS]	X.1(8)	warm (bec.); bask		nǎránǎrà; bǎrǎbǎrà [D]; tǎn-tǎn	tshǎǎ [Nar]; tcǎǎ [Khwe]	tǎa		tšǎrà-tšǎrà		( kara 'bask' [S1])		
tádǎda 'cool, wet, ' [DJLMR]. nyama -talala; -ǎnda	X.1(9)	cool (bec.)		nǎránǎrà; bǎrǎbǎrà [D]								

no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Juǀhoan	!Xóǀ	[Xam	#Kho- mani	N uu
<b>VEOLARS</b>											
1. <i>ngambundu</i> , anyama <i>nembudu</i>	X.1(10)	mouse, rat		dǔrú-b/s		*tudu [PEK]					
1. <i>tómuda</i> [LM].	X.1(11)	swallow (liquid)	*tom [PK: PKK]	tóm	tóm	thom	*tóm [PKaK; PWK,PEK]	(gòm)	túm		
1. <i>-túda</i> [BDEJMN] <i>mbuda</i> , anyama <i>-tjula</i> <i>ngambuda</i> <i>-mboola</i> , <i>mbuda</i> <i>-bofoza</i>	X.1(12)	pierce, drill, bore	*dodo (drill, twirl) [PK]	dǒró-	dǒrǒ- [Khwe]; bǒro [? <Afrik] [Nar]	doro	*dodo 'drill' [PKaK; PWK]; *dǒdǒ [PEK]	bǒorǎ ["<Afrik"] [Sn] (dǒr o [N1])	toro	toǀó [Do]	
1. <i>ngambuda</i> , Kwanyama <i>ǒxa</i> 'tin'; anyama <i>ombohoho</i> ; <i>ngambuda</i> <i>omboxoxo</i> 'pouch', pouch'	X.1(13)	tin		dǒó-b/s (<"German Dose")				tǒo [ha/ha -si]; bǒ'ǒ [ha/ha -si] [Sn]	tǒho [ǎh/ǎh -tǛ] (" < Nama /Nharo < German")		
1. <i>-bedede</i> [Cl.7] <i>shavi-shavi</i>	X.1(14)	butterfly			tebe-tebe, tope-tope, twope-twope [!Ani]	tyiee- tyibese [Khute]; tibiri, tabiri [Ts'ixa]; thededi [Deti]		thathama [ha/hi], dt <sup>h</sup> adama [ha/hi]	dthabi [ih/ ùh dthábu- tǛ]	tebbu- tebbu-si; dadába; dadáma	
1. TG-TUU. *dám. TAA-IUI sep 'lick' in we; nyali 'of darting tongue'	X.1(15)	tongue		nám-mi [N]; lám-mi [Hm, S]; tám-mi [Hm, #A]	tǎm [Nar]; dám [Khwe]		*dam PKaK; PWK], *dám [PEK]	dhāri [ka/ka -si] [S]; thāri [C]; thāri [N]	?nǎn [ǎh/ǎh 'nǎna / 'nǎǎ]	leǀri [S1]	

	no	gloss	PK: PKK	Nama, Dama +, !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǝ	[Xam	#Kho- mani	N uu
'dámba. nyama -lafa; -nyala; nga -nanza; ti -nambitsa; -nambitha	X.1(16)	lick, taste (prob yields <i>dani-b</i> 'honey', i.e. sthg tasty)		nápě-nám 'lick lips'; tsǎǎ lick'	nebe [Nar]; ( <i>daniif</i> [Khwe])					tʔai <sup>q</sup> -ta; tʔa <sup>q</sup> -tten, tʔa <sup>q</sup> -tta		
'dámba. -zwa	X.1(17)	taste (cf. lick)		tsǎǎn [tsǎ]				tsǎ'a		tsʔam; tsʔamma		
'-dábata 'tread on' *-data. nyama -li-nana	X.1(18)	step, tread		dǎǎ								
o <i>nyatho</i> [hl] for 'path' < - <i>nyathola</i> (d, walk); sa, Zulu ) - <i>nyawo</i> 'foot'	X.1(19)	path, trail, foot- print, spoor	*dao 'spoor, path' [PK: PKK]	dǎǎ-b	dào [Nar]	uyao	*dao [PKalK; PWK, PEK]					
'-kòdò 'throat' -kòdoma 'growl').	X.1(20); cf. X.1(50)	wind- pipe, Adam's apple	*dom (throat) [PK, PKK]	dǎmóròs[ D]	dòm-!ono; !oru		*dom [PKalK; PWK, PEK]	!oq'òrù [hi/hi -si]	ǃòlo [ǎh/ǎh -tê] 'pharynx'	dom 'throat' [S1]	dom [Ma]	jum [N uu]
'*-pǎa 'burn'. nyama -lia; ao -tjha	X.1(21)	burn, sting, bite [vi]		nǎǎn [nǎ]; ndǎǎ [Hm] 'bite'				tsxǎnǎ				

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
-tápa 'take, scoop money, clay, etc'. o -thapha 'gather'; á 'dig carelessly, big portion'; ola 'take much'; i -tsápha; nyama -tapa, ula	X.1(22)	take handful of, scoop out		náǀ; náwǀ (pick up, find)					tsǎho kV			
-diama. o -nyama	X.1(23)	vanish, sink		nǎwǎ						tɛ tamma- in-ja		
nga -tawura	X.1(24)	talk about, betray, talk falsely		nǎmǎ				zǎmm				
o -tjhaba 'rise, '; -báda; dima [ACHRS] nkle, shine'; dema 'glitter, be 'y' [LM]; nga [CPS]; nya [PRS]. -kalela; -baneka; imula or [wazimula]	X.1(25)	shine, sparkle, flash		nǎwǎ [N]; tǎwǎ [D]	tébe-tebese [Nar]					dabba 'wink, twinkle'		
nga -posha; 'make mistake'	X.1(26)	miss shot	*sa [PK]				*sa [PWK, PEK]	tsǎ'a		ta: <sup>q</sup> ɿ		
nga zamu	X.1(27)	breast	*sam [PK]	sǎm-s	(bíi) [Nar]; (píi) [Khwe]							

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	{Xam	‡Kho- mani	N uu
-púupú [CFHM] i(li)-hubhu- uu	X.1(28)	lung	*so [PK: PKK]	sòǀ-b	tsǀo	shoo	*so [PKalK; PWK, PEK]	tcoq'ò [ka/ka]		s'ò: [S1]; ssǀ-ssǀ- kǀn [pl] [B&L]		
jikada	X.1(29)	rest	*sǎ [PK: PKK]	sǎǎn [sǎ]	sǎǎ		*sǎ [PKalK; PWK, PEK]	sǎ		sǎ sǎ	cǎ 'lie down' [Do]	
<b>LARS</b> i(li)khanda 'stary camp'; nga ontanda; nyama oǎanda p'	X.1(30)	kraal (pen)					*kada [PKalK; PEK]					
nga gole	X.1(31)	year	*kudi [PK]				*kúdi [PKalK]					
*-gùbǎ [3/4] GJMPS]	X.1(32)	bellows					*kóm(ǎ) [PKalK]					
*-kóbú [+ various]; da mu-kombo; bó 'enlarged'	X.1(33)	navel		ùwǔ-b/s [enlarged]	gòbo "navel string" [Nar]		*gobo [PKalK; PEK]	góbǎ [ha/hi]	góbo [ǎh/ǎh-té] (of child)			
	Cf. X.1(33)	navel				!kom	* um (PKalK; PEK)	n'ò'm [ka/ka -si]	‡nǀn (of adult)			

**Table [VI]15b.** Type X.1 C(C) ~ C(C). Mainly affricates. These may be plain, aspirated or ejective; and may additionally be voiced or voiceless (in some varieties). Although the affricates are mainly alveolar, some varieties reflect palato-alveolar forms.

Proto-X.1: C(C) ~ C(C).			Proto-KHOE (Khoe: Khoe- khoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKaK, EKaK)	JU	TAA	!UI	!UI	
	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK, PWK, PEK	Ju'hoan	!Xóǝ	[Xam	#Kho- mani	N uu
X.1(35)	peel, moult	*thudu [PK]: thuru [PKK]	tsùrú 'pluck feathers'	kxúró [v] [Nar], tsòro [v] [Nar]		*thudu [PWK, PEK]	thuru; dú'uri	tshxūm [tshxuBV] 'pluck'; húli (kV) (de- squamate, meta- morphose)	thurru; turru			
X.1(36)	soft (bec)	*tham [PK: PKK]	tsàm	tham-ka, [Nar], thàm [Khwe]		*tham [PKaK]; *thàm [PWK, PEK]	tx'ám; (tx'ā 'soft'; tx'ám 'soak, bec. soft' [Sn])		t'ai:n 'soft' [S1]			
X.1(37)	taste (cf. lick)		tsāān [tsā]				tsā'a		ts'Δm; ts'Δmma			

s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǝ	Xam	#Kho- mani	N uu
no <i>-thanya</i> 'feel'	X.1(38)	hear, feel, perceive		tsáán [tsâ]				tsá'a		tā:		
C	X.1(39)	seem, feel, BE		tsáánbā [tsāba]				tá'má	tāBV, naBV; !nāBV	ta		
no <i>le-tsha</i> l, lake, pond'; a <i>i(li)baka</i>	X.1(40)	water, liquid		tsāā-b [Hm]	tshāa	tsaa	*tsha [PKalK; PWK], *tshā [PEK]	tcaq (e.g. of eyes)	(!qhāā)	!khwa: [S1]; !kha [S2]	!khā <sup>9</sup> [Do]; !khwa ~ !kha [Ma]	
*-tāpa. anyama <i>-tambula</i> ; <i>mbola</i> 'select'; ti <i>phuna</i> 'take much'; ana <i>-gapa</i> ; <i>mparēla</i> ; a <i>-daphuza</i> ; ūna; -- <i>namfuna</i> ; <i>phuna</i>	X.1(41)	'snatch' (take some of) [HH- JU, TAA]		tsāwú [Hm]; (tsūwú [N])				tsxái-tsxábi; tshám shám- [HH]; tsxábú	tsā bu			
*-kama 'squeeze'. ana <i>-hapa</i> (w s); <i>mola</i> ; <i>mola</i> ; a <i>-lamba</i> 'catch,	X.1(42)	pinch, squeeze, cf tight			ts'am [Nar]			tsxám (sthg to pick it up)	ts'kx'am sV 'squash, squeeze'			

no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóǀ	ǀXam	#Kho- mani	N uu
no <i>ba</i> 'go for, single address, attack; <i>ba</i> 'smash'; <i>pa</i> 'capture, ress'; <i>osa</i> <i>noba</i> ; <i>nda</i> <i>mbudza</i> ; <i>wana</i> <i>bòtla</i> , <i>bòtla</i> ; <i>ti</i> <i>ibùta</i> ; <i>u -dubula</i> *-còobuda 'choose' L]; *-cum 'speak w ed voice' [NS];	X.1(43) attack, speak fiercely, insistent- ly		tsöwà					dtshòhũ 'bash into, hit by hand'; (!gòba 'hit')	ts'oa- ts'oa-ttən; tswatswa 'say angrily'		
-JU, TAA 'bash'. *-kúba 'hit'; *-kóma 'hit, kill'; *-tútuma 'beat, nd' [CJ]; *-dóma 'peck'[CJ]; ho - <i>thuba</i>	X.1(44) strike, pound						ǀfũ [HH]	dtshòhũ 'bash into, hit by hand'			



	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe, Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
	X.1(45)	bitter, sour, salty	*tsadu 'sour' [PK]	'au 'bitter' [N]; kx'au [!Ora]	tsau 'sour, salty' [Nar- Vi], tcérú [Khwe]		*tsadu [PKalK]; *tsádú 'bitter' [PEK]	ts'arù [ka/ka -si] 'kidney' [Sn]	tá'u (kâ) 'bitter' [!Xóǀ]			
-púpuma; '-tùmba 'swell'; nyama -tutuma; da -shu-shuma; ana -tšuba	X.1(46)	sprout			tsòm [Nar] tcòm [Khwe]		*tsom [PKalK]; PWK, PEK]		tshòhm 'flower' [vi]			
JU,TAA 'squeeze '-dóma 'suck' 'múda [LM] <*- 'a 'chew, drink' ELM]; 'k from animal': da -komba; ana -thumotsa; sa -thwiba, wiba	X.1(47)	milk into mouth, suckle	*tom 'swallow' [PK]		tsxom (suckle from animal)		*tsxóm [PKalK]; PWK, PEK]	tsxóm [loan?]	tsxùm 'squeeze out' [HH]	kwo <sup>9</sup> m 'suck'		
ny -shuuka 'sneak no -tshoha 'startle, start suddenly'; ti -étfuka	X.1(48)	go away, leave sud- denly						tsxōa-tsxōa		ts'oa <sup>9</sup> -kən 'disperse'		
ana se-rubi 'den'; a um-hume	X.1(49)	hole, burrow, den						dòm [ka/ka - si] [Sn]	dzūhe [èh/ àh dzūhā]	dum		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	[HH] !Xóǝ	[Xam	#Kho- mani	N uu
2 'upper lip', -JU, TAA 'upper -TG-TUU. *-dòmò [3/4] 'lip, mouth, beak'	X.1(50)	lip, mouth			ts'om (upper) [Nar]; tc'óm 'lip, mouth, beak' [Khwe]		*ts'om [PKalK; PWK, PEK]	zũ [ka/ka -si] 'beak, tip' [HH]	dzúm [ǎh/ ǎh dzúma-té] 'upper lip, beak'	?(tu:)	ŋcu [Do]	jum [N uu]

TABLES [VI] 16-19 respectively show dental, palatoalveolar, lateral and (post)alveolar clicks in alternation with non-click consonants, in patterns of the main 'X' type, 'Q ~ C(C)'.  
e. Patterns of Type X involving bilabial clicks are largely incorporated as sub-types of pattern Type IV.X.

in Table [VI]16. Dental clicks in alternation with non-click consonants. Pattern Type I.X.

			Proto-KHOE (Khoe: Khoe-khoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
es	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǝ	[Xam	#Kho- mani	N uu
VC	I.X(1)	leave behind	*xu [PK, PKK]	xũ	-xu	huu 'leave'	*xu [PKalK; PWK],	['húíá [vʔ]		xu: u:i [S1]		

	no	gloss	PK: PKK	Nama, Dama +, !Ora	Khwe; Naro	Hie- Chware	*xú [PEK] PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
-cúkú [S]; ú e]; ro ou- ; li bú-	I.X(2)	night		tsuxu-b	thuù-xu “walk some-where in the night” [Nar]		*thũ ‘night’ [PKalK]; *ʔui ‘eve- ning’ [PKalK]	glú [ka/ka – si]	lnúe [èh/ǎh  núm-té];			
C	I.X(3)	white			xǎe-xǎe-se [adj] [Nar]	hwehe	*xǎe [PKalK]	leū [Sn]				
	I.X(4)	(to) milk	*tsʔao [PK]; * xʔao [PKK]	ʔǎǎ [  ao];  kxʔao [!Ora]	tsʔao	tsao	*tsʔao [PKalK; PWK, PEK]	kxʔǎǎ [vʔ] [loan?]				
-bába sharp, r, sting’ e]; -bába; *-káda, dì er, sour, p, e’	I.X(5)	be sharp, sting, bite	PK *tsʔai [PK]: * xʔai [PKK]	ʔǎǎ [  ǎ] [N];  kxʔa- kxʔa [!Ora]	tsʔéé [Nar-Vi], tcʔéé [Khwe]		*tsʔai [PKalK]; *tsʔái [PWK, PEK]		síʔi [!Xóǀ]	(ʔtsi: [S1])		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóö	Xam	#Kho- mani	N uu
U- -jiba; -ba; -e ba; da va	I.X(6)	steal	*tsʔā [PK]; * xʔā [PKK]	ään-(bā) [  ā-ba]	ts'āā [Nar]; tc'āā [Khwe]	tsaa [ʔ B]	*tsʔā [PKalK]; *tsʔā (ā) [PWK]	dcáá [ <i>irreg</i> vt] [dš'āa, Sn]	ts'āa kV			
ginal, cf r words dance'	I.X(7)	dance, trad.		ái-s [  gai-s]				džxáni [S]; džxáni [C]; tšxäe [N] (of men)	? (  xāā [  xaV] [vt])		#kei-cè [Do]; #ʔai-ce [Ma]	
2 (as n)	I.X(8)	smoke [vi], smoul-der	*tsʔani [PK], * xʔan [PKK]	ʔán-ni [  anni-s] [N];  kx'an [!Ora]	ts'éné [n, vi] [Naro]; tc'áni [n] [Khwe]		*tsʔani [PKalK; PEK]; *tsʔani [PWK]		ts'kx'áje [èh]	Áhi: [S1]		
ati ndza	I.X(9)	love, like	* am [PK], * am [PKK]	nām	n ām	llgam “love, covet”	* nam [* am] [PKalK; PWK]; * am [PEK]	n a am [vt]	nām kV; tsāha kV	kaŋ-a [S1]; llaŋ [S2]		
ati áma	I.X((10)	pinch, squeeze		llkhām	x'ám; ts'ám			tsxám ‘sthg to pick it up’	ts'kx'ám ‘squeeze out (sthg wet)’			

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóó	[Xam	#Kho- mani	N uu
C	IX(11)	young, fresh, 'green'			haini [C2]; llhã [Khwe]	llgai-tfu [C1]		kã'i 'young, green, small' [Sn] hãi 'young, green, small' [Sn]		[kain-ya [ [Xam]		
C. o - te e'	IX(12)	young, new, fresh'			tsai [Nar]			zàqi [adj] (new); zé [adj] (new)	dzai, [!Xóó]	t'ãñ [S1] 'little'; txe: [S2]		
C. -piã no -tjha	IX(13)	little, new, young	PKK * a	[?ásã [Nama]; [?ã-sa [!Ora]				[x'ãa-[x'ãna 'thin' [Sn]	[qhãã (kV) [!Xóó]	llka:ŋ [ [Xam]		
CC	IX(14)	small, narrow, thin		#kharí [Nama]	[xaré 'thin' [Nar-Ba], [kai 'thin' [Nar-Ba]; [x'aré [Nar- Vi]			ts'è-mã [Ju 'hoan], ts'è-mã, ts'è- mã [!Xũŋ- C], ts'è-mã, ts'è- mã, ts'èrè-mã [!Xũŋ-N]		#ëri, ts'ere, #eni [S1], #enni [ [Xam], [kxre, [S2]		
	IX(15)	bec. warm, bask			tshãã [Nar]	tša				[kara 'bask' [S1]		

Table [VI]17. Type II.X. Palatoalveolar clicks in alternation with non-click consonants.

Table 17. Type II.X. (C)			Proto-KHOE (Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI
s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; WK, PEK	Ju 'hoan	!Xóǒ	Xam	#Kho-mani N uu
*-tí; anga ti	II.X(1)	tree					*yi [PEK]				
*ana pi, no pe; simbi	II.X(2)	axe					*yibe [PEK]		tshí pii 'iron, metal' [èh/èh -tê] ["Tsw"]		
*-túmbí [NP]; 3(2)]	II.X(3)	egg, testicle					*?yubi [PEK]				
*-jádá	II.X(4)	rock		(#áän-b[D] [#gâ-b] 'rock-face')			*cxana [PEK]				
*-cóba; aba; oša - a; ba	II.X(5)	mix		(#ǒwé [#gobe])	#xòm; xóm-xom ('mix up w. sand')		(*#xom [PKalK; PWK];) *cxom [PEK]	dòm'm; dobedà			

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; WK, PEK	Ju!hoan	!Xóǀ	[Xam	#Kho- mani	N uu
	II.X(10)	twist (esp. by <i>rolling</i> ), fold		#úmi [ʃgumi]	#obe			n#ǀqmi 'twist' [vt]	dthúm kV 'fold, roll up'; tshxòm K v 'wring'			
	II.X(11)	sew, fold		#ʔóm [ʃom] [N]; #ʔom [!Ora]	txoro			txómá	ǀúa (ǀǂV)	#ǀam [S1]; ǀkxama [S2]		

Table [VI]18. Type III.X. Alveolar lateral clicks in alternation with non-click consonants.

	no	gloss	Proto-KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto- KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI
	III.X(1)	scrape out, scratch clean		xǀá	tsxǀá 'scratch'			ǀxǀá (pipe) [Sn]	ǀǀqǀhǀǀǀ 'scratch, scrape'		
	III.X(2)	snatch, grab handful		tsǀǀwǀú [Hm]				tsxǀá-tsxǀǀǀ; nǀǀǀǀ [vt] 'take handful' < Sn)	tsǀǀǀǀǀ; ǀǀǀǀǀ kV	ǀǀǀǀǀ 'take' [S1]	

no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
III.X(3)	open (e.g. tin)	*  xoba [PK, PKK]	khǀwà;   khǀwǎ	kxǀá [Nar];   xǀobe		*  xobe, *  xode [PKalK], *  xode [PEK]	!ʔoahn[vt]	lló'a tV [sg] llǀǀ'be [pl]; llqǀúa kV 'remove lid, uncover, open'	llkwara [vi] [S1]		
III.X(4)	dig	*khao [PK, PKK]		tshǀao (ǀǀí); !ǀò (dig out) [Nar]	tsaho; llgao "to plough";  gao "plough, dig, cultivate"	*tshao (PKalK; PWK), *tshǀó [PEK]	nllaq'm [vt];	llǀǀho (shovel)			



**Table [VI]19.** Type IV.X. (Post)alveolar clicks in alternation with non-click consonants.

type IV.X.i: !~|~(C(C)). Sub-type IV.X.ii: !~⊙~(C(C))

			Proto-KHOE (Khoe: Khoekhoe)	KHOE- KHOE	West KALA- HARI	East KALA- HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
9. : (C) :	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju!hoan	!Xóǀ	[Xam	‡Kho- mani	N uu
	IV.X(1)	cut (esp. meat) into strips (cut 'stripe-wise')		!áá [!gā]	n!are !ʔaa [Nar]; !áre (for biltong) [Nar]	kare	*!ade [PKalK; PWK], *kade [PEK]; (*!ʔan(i) [PKalK])	larèh [vʔ]; larùh [vʔ] (strips); thàró (strips); g!xàré (open animal)	!nàhle (ká) 'into strips', !āhle kV 'into pieces'			
	IV.X(2)	rhinoceros (white, <i>Breitmaul</i> )	*!aba [PK, PKK]	!nāwā-		gaba	*!nábá [PKalK]; *ŋgábá [PEK]	?				
	IV.X(3)	whip, sjambok		!nāwā-b	n!abá			n!abá [ha/ha -si] [loan?]	!lǀám [ih/ ùh !lǀama-tê]			
	IV.X(4)	chin jaw(bone), jowl	*!jan(i) (chin) [PK], *!an [PKK]; *!ani (jaw) [PK, PKK]	!ān-s [!gan-s]	!gāne 'chin' [Nar]; !lǀái 'cheek' [Nar]	!gaie 'cheek'; ghanee 'chin, jaw'; !lkaii 'jaw'; !khama 'chin'	*!jan(i) 'chin' [PKalK; PWK], *gani [PEK]; *!nani 'jaw' [PKalK; PWK]	g!aihn [ka/ka -si]	dzàni [āh/āh -tê]; ‡áē [‡ēē] [èh/ùh ‡ám(a)-tê] 'jaw' cf. 'ear'			

no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKalK; PWK, PEK	Ju!'hoan	!Xóð	!Xam	#Kho- mani	N uu
IV.X(5)	big	*kai	káí	kai (bec.) [Nar]			!àè; n!a'an [vi, sg subj]	!xaV [sg], !xaBV [pl]	!keri [sg], !ke- !ke-tən [pl]		
IV.X(6)	good, right	*!āī [PK, PKK]	!áin [!gāi]	!āè [Nar]		*!āī 'good, right' [PKalK]; *kāī [PEK]; *qadi 'good, enjoyable' [PKalK]	!àisi [adj]		twaiī [S1]; !hāī-ja [S2]		
IV.X(7)	dark, dusky		!khàè [adj]	gái (rare) [Nar-Ba]; kaè [Nar-Vi] (twilight)			?(g!ā(a) [Ju!'hoan]); g!ā(e) [!Xūr- C]; g!āe [!Xūr- N]	dt'kx'ai [ih]; qàhe [èh] 'dusk'	!kei-ja 'brown' [S1]		
IV.X(8)	hide, conceal, store away		!nāūn; 'store up'; gāū-gāū; sàūn		gao	*!nao [PKalK]; (*!nao [PWK]); ngao [PEK]	?	!gàh'o	!nau: [S1]		
IV.X(9)	wait (for)		!ʔāūn [!āu]	!āā			!àn	!àh'n [!àh'JV];	!ka.; !kā [S1]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóǒ	Xam	#Kho- mani	N uu
	IV.X(10)	fear, respect, avoid, be modest	*!ʔao [PK, PKK]; *tao (be modest) [PKK]	!háǒ	!ʔǎǒ [Nar]; sǎǒ 'avoid' [Nar]; zǎu (sthg avoided, cf. 'bad') [Nar]	au [v]; auo [n]	*!ʔao [PKaK; PWK]; *ʔao [PEK]; (*dzau 'omen' [PKaK; PWK, PEK])	!ʔǎǒ [vt] [loan?]	g kx'ǎǒ 'reject'			
. HH- DE-JU			*!hami [PKK]	!hǎǎé-!àù 'chase-hunt'	!ǎǎ [Nar]			!ǎǎǎ [vt] [loan?]	!qǎǎhe kV	xabe [S1]		
e K.ii: !~ǒ												
	IV.X(11)	twirl, drill, stir, rotate			!xǎri	gwere 'stir'		nllǎri [S]; nllari [C]; nllari, nllali [N]	gǒxǎle-sǎ [gǒxǎLV]	!xwǎri, !xwǎni [vi] 'turn' [S1]		
	IV.X(12)	hard, fierce, strong (stone, heat)	*!adi 'hard' [PK]	!ǎi [  gai-sa	!ari-xa; tsǎ(r)i-tǎri; ǎxǎi-ǎxǎi 'warm up' [vi]		*!ádi [PKaK; PWK], *kádi [PEK]		(note: ǒ'ǎi 'hot')	!na:,  gi: [S1]; !nai: [S2]		
	IV.X.(13)	bush sp., cf tree			g!ǒǒ (acacia sp.) [Nar]	!khoo		g!hǒé [ka/ka -] (edible berries)		ǒho: 'bush' [S1]	ǒoo 'wood' [N uu]	

	no	gloss	PK: PKK	Nama, Dama +, !Ora	Khwe; Naro	Hie- Chware	PKaIK; PWK, PEK	Ju 'hoan	!Xóó	Xam	#Kho- mani	N uu
	IV.X(14)	larva - e.g. caterpillar, grub, maggot ; also worm			n!oo (caterpillar)	bokoo 'worm' [Bantu]			ǀgòó [!h/ !h ǀgáǎ-tê] [coll. in sg]; ǀòhò-ǀòhò (gen.) [èh/èh - tê]			
UU	IV.X(15)	sleep, rest	*sā (rest) PK, PKK)	#khàám- (#khân-); sáán; háán [há]	glláá; sáa		*sā (rest) [PKaIK; PWK, PEK]	n!hán [vi]; glláán [irreg]	ǀǀá'á; llgáá			
	IV.X(16)	bush, tree, stick		hǎi-				!aihn [ka/ka -si] [!ái [Sn]]	?ǀnáje [èh/ àh ?ǀnáǎ]			
	IV.X(17)	animal(s), game, <i>nyamatsane</i>		xǎwárǎ, xǎmárǐ-n [N] 'game'; xǎmánǐ- [D]	(#háa di kx'oo-ǀoa) [Nar] (animals of the veld)	#kam  ge 'wild animal'		!háma [ka/ka]	ǀáje ǀáa [àh/àh, ǀáje ǀ'áni] 'game'	!khwai [S1]; ǀpwai [S2]		
	IV.X(18)	meat, flesh, <i>nyama</i>	* xa	(llǎn [llgan-i] [N]; llǎn-i [llgái-i] [S]	xáa [Nar]		* xa [PKaIK; PWK, PEK]	!há [ka/ka - si]	ǀáje [èh] 'meat (gen)'	ǎ:; eŋ [S1]; ǀpwai [S2]		
	IV.X(19)	body			!ʔám-ku-!ʔoo (body-part) [Nar]			?	?ǀnáhǎ (inal) [àh/àh -tê/-ní]	!kau-u- kn [sg], !kǎū-!ǎū- wa-ŋ [pʔ] [S1]		

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no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie- Chware	PKa!K; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
IV.X(20)	male child, son		òàn-b, ààn-b [D]; !áán(sǎ)-b [!gâ(sa)b] [D] (younger m. sibling)				!'hán [ha/si - sin]				

TABLES for Chapter VI. TABLES [VI]20-25 Patterns involving selected ‘accompaniments’.

Table [VI]20. Plain click /Q/ as leftmost term in table.

Where this term patterns with nasalized segments elsewhere in the series, the common factor is membership of a particular gender.

Table [VI]20.			Proto-KHOE (Khoë: Khoë-khoë)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
Examples	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju'hoan	!Xóð	Xam	#Kho-mani	N uu
Original; H-[TAA] (n)	a. I.5(10)	gemsbok		!ǎé-b [  gae-b]				(!ǎé-kx'o [ha/hi -si]) [!ǎé = 'hunt']	ǎhe [èh]			
EC	b. IV.3(5)	good, right	PK(K) *!ǎi	!áin [!ǎi] [Nama]; !aī [!Ora]	!áī [Nar-Ba], kyāī [Khwe], kxǎé- kxǎé [Nar-Vi]		PKal *!ǎi	!ǎisi [Sn], kǎi, kǎī [!Xǔŋ-C], kǎi [!Xǔŋ-N]	qái [!Xóð], #kǎi [! 'Auo]	?wai:i [S1]		
Khoë-germanic	c. I.5(4)	sprout, flower, bloom [n]		uru-b/s [  guru-]; hai-!nuru-s	nubu (of tree) [Nar]			n!ù'ùbù [ka/ka -si]	ǂ!qhùm			
	d. I.5(9); I.3(6)	stomach (innards)		ani-b [  gani-b] [Hm]	nǎā [Nar]		*!na (PKalK, PWK), *!a (PEK)	n!áng [ka/ka] 'inside'	kx'ǎn [èh/ àh]	naiŋ 'liver' [S2]		

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju!'hoan	!Xóò	Xam	#Kho- mani	N uu
	e. II.2(9)	fat, marrow, grease, oil, exudation, honey	*#ai (*#ae) 'marrow, fruit pulp' [PK, PKK]	#ǎé-b [#gae-b] 'marrow'	#ǎé 'marrow' [Nar]		(*#ai [*#ae]) 'marrow, fruit pulp' [PKalK]	n ái 'fat, oil' [ka/ka];  lla'á 'marrow' [ka/ka]	sáni [> sini] [ǎh/ǎh] 'glandular excretion'; sǎā [ǎh/ǎh] 'fat, marrow, oil, honey'			
ial	f.	wing		llǎwò-b [llgabo-b]	?(#xámà [Nar])	(llkabaa)		n!ābù [ka/ka -si] [Sn]				
	g. IV.3(2)	spy out, look for; but see below:		!áwà [!gapa] 'look'	n!áá 'look around'; (!aa-!aa)			n!ahm [vt]	#ǎh'ǎ		lla <sup>n</sup> a <sup>n</sup> 'look for' [N uu]	
	h. III.3(20)	bull		llòò-b [llgò-b] 'bull'	!é-nllgo [Khwe] 'wildebeest bull'			ll'huù [ha/hi -] [pr.n] 'lone blue wildebeest'		!nu: [S1] 'blue wilde- beest'		
/C	i. cf. II.3(6)	WANT, desire		#ao[#gao] [AUX][stative]	#áo 'want' [Nar, Xanagas var.]; n#ǎ [Khwe]			n#'hao [Sn] (in compound)	#áo kV 'long for',  #?án-sí 'wish'	#kaò-wa [ Xam]		
JU-int	j. III.3(11); cf. II.4(2)	hook (vt)		llǎwè [vt] [llgabe]				n!'hám [vt] [Di]				

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóò	Xam	‡Kho- mani	N uu
U-int	k. III.3(12)	rain, drizzle, spit		lläó [llgao] [vr] 'rain slanting rain'	nllào 'rainy season' [Nar]			g!á [S]; gllà [C]; gllà [N];  g!áú [ka/ka -si] 'drop of rain'	lgáũ-[gáũ 'spit, drizzle';  dts'kx'áu- dts'kx'áu;  sáũ (!áa) 'fall (of first rains)'			
	l. II.4(4)	enter, insert	PK *#ā	#āā [ʔgā]	(V +) #āā [Nar]; #āā [Khwe]			g!á'amá	ŷlu [sg] (ŷLV), !gá'o [pl]	!e:	‡'ee [N uu]	
ore', ial	m. III.3(5)	growl		llään [llgā]				ʔ(g!aq'm- g!a'm)	!nāhna [!naV] 'snore, growl at'			



Table [VI]21. Voiced basic click /gQ/ as leftmost term.

Table 21.			Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI	
s	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju'hoan	!Xóǀ	Xam	#Kho- mani	N uu
blet in	a. II.2(2)	springhare ( <i>tsoro</i> )		#ǀó-b [ǀgǀó- b]	gǀóo [Nar]	joo	*ǀo [PKalK; PWK]	nǀoqm [ha/hi -]; (gǀóo [ha/hi -] [loan?])	[nǀi [ih/ùh [nǀa-tê]			
	b. IV.X(4)	chin jaw(bone), jowl	ǀan(i) (chin) [PK], *ǀan [PKK]; *ǀani (jaw) [PK, PKK]	ǀǎn-s [ǀgan- s]	ǀgǎne 'chin' [Nar]; gǀǀgǎi 'cheek' [Nar]	ǀgaie 'cheek'; ghanee 'chin, jaw'; ǀlkaii 'jaw'; ǀkhama 'chin'	*ǀan(i) 'chin' [PKalK; PWK], *gani [PEK]; *ǀnani 'jaw' [PKalK; PWK]	gǀaihn [ka/ka -si]	dzǎni [ǎh/ǎh -tê];  ǀǎē [ǀēē] [èh/ùh ǀǎm(a)-tê] 'jaw' cf. 'ear'			
	c. I.2(6)	fly	*ǀani	[iǀnǎ-s [ǀgǎna-s]	[ǀgéné [Nar]	[ǀgenee 'fly, bee'	*ǀani [PKalK; PWK], *ǀini [PEK]	ǀǎni [ha/hi -] [pr n]	ǀǎǐ (biting sp.)			

**Table [VI]22.** Click followed by voiceless velar fricative or affricate /Qx<sup>h</sup>/ as leftmost term.

Table			Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKaK, EKaK)	JU	TAA	!UI	!UI	
2.	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKaK; PWK, PEK	Ju'hoan	!Xóǀ	[Xam	‡Kho- mani	N uu
	a. I.3(15)	urinate	*[xam [PK]	[khám	[xám [Nar]		*[xam [PKaK; PWK, PEK]	g xám [vt]	llqháa			
	b. I.3(17)	side, edge, face		[kháá-b	? (káá “finishing point” [Nar])			g á'a [ka/ka -si]	llqháa ‡âē [ǎh/ǎh llqháa ‡âma-tê] (of spear); sâ'ǎ (of axe)			
al	c. III.3(15)	snail		llkháán-xàè-s [llkhâxaes]					!qhán [ih/ùh !qhâna-tê]			
	d. II.4.(14)	scorpion (1)		‡khǎi-b; khâi		llkadi	*llx <sup>h</sup> adi [PkaK]; *llx <sup>h</sup> adi [PWK]; *ll <sup>h</sup> adi [PEK]	g‡xâi [ha/hi -]	llâē [èh/ǎh llâma-tê] (gen.)			
	e.	hartbees		llkhàmà-b 'red'	llxamà	llkama		llxàmà [ha/hi -] [Sn] [loan?]	llgâ'ǎ	!k'wǎ [S1]		
C	f. II.4.(13)	emerge, rise, wake up		‡khái	ll <sup>h</sup> ari-se [Nar]			‡xái [vi] 'get up'	‡êē [vi]			

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKaK; PwK, PEK	Ju!hoan	!Xóǀ	Xam	#Kho- mani	N uu
	g. I.5(5)	tear, rip		kháú 'tear'; ‡náú-!áá 'break thr. (of sun)'	!xábe [vt]; !xai [vi]			lláq'in [vi] (also break e.g. of dawn)	!nǎhu [!nahBV] 'tear, split, rip'	!kwara; !kuru [S1]		
C	h. IV.2(8)	invert		!khupu	llübu [Nar]				llühu kV 'overturn', llühu (ká ll'ûma)	!nwobbo 'stir, swirl stick'		
	i. I.2(1)	be sick, tired		khüi 'bec.sick' [Nama];  üi [  gui]'tired of, jaded'	llk'uiǎ [Nar- Ba]			llkwĩ [N1], kwi [N2]	üni-ni 'illness' [!Xóǀ]	ku: [S1]	ǀ <sup>2</sup> wi <sup>2</sup> i 'tired' [Ma]	
TUU, VC	j. I.5(1)	give		khǎe	kháá (gene- rously)	thee		ǀǎn	!qháǎ;  na [TG- 'Dative']	ǎ [  Xam],  ka: [S1]		
VC	k. I.5(11)	die, be dead, NEG BE, 'departed'		khǎi,  kháwǐ (rare)	háa [Nar]; káá (dead);			!ái [vi, sg subj !ǎo pl subj]	ǀǎa	a:		
	l. III.3(2)	open (e.g. tin)	*llxoba [PK, PKK]	khǒwǎ; llkhǒwǎ	kxóá [Nar]; llxòbe		*llxobe, *llxode [PKaK], *llxode [PEK]	!ʔoahn[vt]	lló'a tV [sg] llgù'be [pl]			

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKaK; PwK, PEK	Ju 'hoan	!Xóǀ	Xam	‡Kho- mani	N uu
	m. IV.2(16)	take, catch, hold	*!xo [PK, PKK]	!khóó		llkhoo 'gather, take by force' chu 'acquire'; ghoo "catch, seize"	*!xo [PKaK; PwK], *xo [PEK];  * o [PKaK]	gù [sg <i>obj</i> ] n 'hui [pl <i>obj</i> ]	llgùu-llgùu; llgùi-llgùi; kx'úi [kx'uV];   òho	ho: 'take' [S1]	hoo [N uu]	
	n. III.4(5)	pangolin (‘scaly anteater’)		llkhóm-mi				n#hòqí [ha/hi -]	llgū'm [èh/àh llgū'm-sā/ llgū'm sána- tê]			
2 'scoop er'	o. III.3(1)	scrape out		llkhóm	llòbe [Nar]; ‡x'oe [Nar]; dòe [Nar]			n!òqe [vi] 'scoop out contents' [Sn]	llhóbe kV 'take out sand'	k'ó:e [S1]		
	p. II.2(12)	sweet		‡khèñ [N]		(eye)		n à'ng [vi]; (taq'in)		(a:kn [S1])		
EC	q. III.3(16)	same		llkhā		llxa- 'another (same)'		llna-llna [N2]	? (!gā/hn'ń)	[ka- [ Xam]		

Table [VI]23. Click with ‘delayed’ aspiration /Qʰ/ as leftmost term.

Table			Proto-KHOE (Khoe: Khoe-khoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI
3.	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Jul’hoan	!Xóǿ	[Xam	#Kho-mani   N uu
	a. I.1(9)	skin, shell, peel (n)		!hóǿ-b				nǎ [ka/ka - si]			!ʔuunke ‘tsamma shell’ [Do]
M of stah? (ld also colour.)	b. I.2(5)	wildcat		(!árò)- !hóǎn-b/s [N]; n ǎa-s, !hǎa-b [!Ora]	n ǎa	guri-jwa “tiger-cat”		n oahn [ha/hi -]		Ǿmwa [S2]	Ǿŋwa [Do]
1]	c. III.4(6)	crow		!hóǎrǎ-b [N]; gǎrǎ-b	hǎra [Nar]	kola-kola (white-necked)		n#ǎǎgrǎ [ha/hi -si] [not in Sn]; (cf. !oagrǎ [ha/hi -] ‘hawk’)	!nǎha-lǎ [ǎh/ǎh -tǎ]	!lgwa: (black) [S2]	
	d. II.3(3)	arm, forearm		?(!hǎǎn-b)	tshǎu [Khwe]		*tshau [PKalK]	g#ǎǎǎǎ [ka/ka -si]	!lnǎho [ǎh/ǎh -tǎ]		‘lower arm’

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKa!K; PWK, PEK	Ju 'hoan	!Xóǀ	[Xam	ǂKho- mani	N uu
	e. III.3(13)	dress, wear, put on foot- wear		ll'hāró, ll'hābó [vt]	nllābo; kxábà (“< Tsw., ‘wear sthg new, look nice’”)			gllábá [vt]	!gā'o [!ga'BV] ‘put on shoes’			
C, n?]	f. II.3(2)	grey, roan		ǂ'hoa ‘dapple- grey, of horse’ [Nama+]				ǂ'hōa [loan?]	llnǀhba, ǀhba	!hoa:ka ‘black, dark blue’ [S1]		
	g. III.3(3)	nail (of hand, foot); horn	(*llodo) [PK], *lloro [PKK]	llórò- [llgoro-b/s]  ǂ'hūrù-b ‘kudu horn, trumpet’	llqorò	(!khole ‘claw’)	(*llodo) [PKa!K; PEK];	!ù'uru [ka/ka -si] [Sn]	llqûle [èh/ǎh, pl llqûn-sâ, dim llqûlu- bâ],	llkuru [sg], llkullku-tǀn [S1]; llkoro ‘horns’ [ [Xam] llkuri [sg], llkuro-ke [pl] [S2]	llkoro-si [sg], llkoro-ke [pl] [Ma] ‘nail’	
	h. IV.2(11)	bee, honey		!hāwú-b				llāowā [hi/hi -] ‘bee, honey’ [Sn]		!kau ‘honey’ [S2]	ǂkau ‘honey’ [Do]	
	i. III.3(23)	tie up, catch		ll'hāú ‘catch, ensnare’				ll'àng [vt/i]	llxáu kV [vt] ‘snare’	!xau-ka [S1]		

	no	gloss	PK: PKK	Nama, Dama +, !Ora	Khwe; Naro	Hie-Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	#Kho- mani	N uu
	j. IV.X(10)	fcar, respect, avoid, be modest	*!ʔao [PK, PKK]; *tao (be modest) [PKK]	!háǀ	!ʔào [Nar]; sǎǀ 'avoid' [Nar]; zǎǀ (sthg avoided, cf. 'bad') [Nar]	au [v]; auo [n]	*!ʔao [PKaK; PWK]; *ʔao [PEK]; (*dzau 'omen' [PKaK; PWK, PEK])	!ʔào [vʔ] [loan?]	g kx'ǎo 'reject'			

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Table [VI]24. Glottalized click /Qʔ/ as leftmost term.

Table 4.			Proto-KHOE (Khoe: Khoe-khoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKaK, EKaK)	JU	TAA	!UI	!UI	
	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKaK; PWK, PEK	Ju'hoan	!Xóǀ	[Xam	#Kho-mani	Njuu
a. II.2(7)	tip, point, edge, top	*ʔam (top, 'Oberseite') [PK, PKK]	ʔám [ʔam] 'over'; (ʔám-mi/s [am-mi] 'edge'; ʔám-s [am-s] 'mouth')	ʔam 'point (e.g. of thorn)' [Nar]; gyam 'side, edge' [Khwe]; kx'am 'top edge, surface; mouth' [Khwe]	[gam "point, side"	*ʔam [PKaK; PWK], *ʔyam [PEK]		ʔám [ǎh/ǎh ʔáma-ni/-tê];	ɛm: ( e- emmi [pʔ]) [SI]			
b. I.2(2)	bec. dry		ʔòǀ [vi] [  ǀ] 'go dry';  hǀrú 'dry out';  khuru 'bec. dry' [Nama]; ʔo [!Ora] 'wither, be dried'	ʔòǀ [adj] [Nar]; ʔòǀ [vi] [Khwe]		PKaK *ʔo		ǀʔòǀ 'dry out'; ʔòǀ 'be dry'; !nǀǀo 'evaporate, die [euph]'				



	no	gloss	PKK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
sa mla rk'; na le'	c. III.4(3)	smile, kiss		!ʔóá [lloa] 'kiss';  nóm 'smile'		ñgoma	* numa [PEK] 'kiss'	#ʔómá [vʔ] 'kiss'; zoma [vʔ] 'smile'	(#ʔúmā 'kiss') [loan?]			
	d. II.4(9)	stick to		#ʔāwé [ʔabe] 'sit glued to'	(!ʔam-!ʔam 'sticky')			#ʔámá 'adhering to'	dt'kx'ába kV			
	e. II.2(10)	face (> 'surface', sole)	(*kxʔai [PK])	#ʔái-b [ʔai- b]			(*kxʔai [PWK], *kʔai [PEK])	kx'ái [  x'ái [Sn]] [ka/ka -si]	(tāhi 'sole')			
ial	f. IV.2(10)	work, earn		!ʔóá [!oa]				llkx'òá [vʔ]		(_toba [S1])		
CC	g. II.4(6)	salt(y)	PKK * ʔu 'salt'	#ʔòò-xǎ [ʔò- xa] [Nama]; #kx'o-xa-sa,  ʔū- ʔū-sa [!Ora]				n#ʔi 'salty' [Ju'hoan]	!nób 'salt' [S6]	ʔko: 'salt' [S1]		
OE-int	h. III.3(14)	sinew, vein, cord	* ʔaba	!ʔáwá-b [llapa-b]	!ʔábá 'sinew' [Nar];  !x'ái 'vein' [Nar]	!kaba 'tendon'; llkaba 'thread, riempie'; llgadi 'sinew'	* ʔaba [PKalK; PEK], * ʔábá [PWK]		!gāba [âh/âh, !gām-tê] (of neck)			( kari [S1])

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	ǀKho- mani	N uu
AA]	i. IV.3(4)	egg		!ʔüwũ-s [!lupu-s]	ǂʔubi [Nar]; gǂüí 'rotten, (of unhatched, bad eggs)' [Nar]		*ǂʔubi [PKalK]; *ǂʔúbí [PWK], *ʔyubi [PEK]	n!ù [ka/ka - si]; ds'uu [ka/ka -si] 'ostrich- egg' [Sn])	ǂgúǎ [ǎh e/u], ǂgũhi [ih/ùh ǂgũha-te] 'bad'; ǂúũ [ih/ùh ǂúǎ-tê] (empty, ostrich)	!kauí [sg], !kwi:tn [pl] [S1]		

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in Table [VI]25. Nasalized click /nQ/as leftmost term.

in Table			Proto-KHOE (Khoe: Khoekhoe)	KHOE-KHOE	West KALA-HARI	East KALA-HARI	Proto-KHOE (Kalahari; WKalK, EKalK)	JU	TAA	!UI	!UI
es	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǀ	Xam	‡Kho-mani   N uu
	a. IV.2(1)	whip, sjambok		!nǎwǎ-b [!naba-b]	n!abǎ			n!abǎ [ha/ha-si] [loan?]	llǎǎm [ih/ùh llǎǎma-tê]		
	b. cf. IV.2(1)	rhinoceros 'white, ( <i>Breitmaul</i> )'	*!aba [PK, PKK]	!nǎwǎ-		gaba	*!nábǎ [PKalK]; *ǎǎgábǎ [PEK]				
-KHOE-TAA	c. III.3(19)	shake, agitate	*!lubu [PK, PKK]	llnǔwú	nllǔbu; kǒaba-kǒaba 'shake out'		*!lnubu (*!lubu) [PKalK; PWK, PEK]	nllubù [vt]	llnǔhbu-llnǔhbu; llǒǒbu-llǒǒbu kV; gǒhba kV 'shake out'	!ku-!ku [S1]; xu-tǎn [S1]	
	d. II.4(3)	throw at, shoot, hit, strike		‡nǒǎ	n‡ǒǎ			n!o'ǎn [vt]			
ernal; K ernal	e. I.3(12)	love, like	*!ǎm [PK], *!ǎm [PKK]	nǎm	n ǎm	llǎm "love, covet"	*!ǎm [!ǎm] [PKalK; PWK]; *!ǎm [PEK]	n ǎm [vt]	nǎm kV; tsǎha kV (cf. Swati -tsǎndǎ)	_ kǎǎ-a [S1]; llǎǎ [S2]	

	no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKalK; PWK, PEK	Ju 'hoan	!Xóǿ	Xam	#Kho- mani	N uu
ɔ	f. I.3(17)	leave, leave alone, behind		!nǎǎ [!nǎ] [N]; !hǎǎn [!hǎ] [D]	!aù; !lxaò 'infant at home'			nllah [vt];  !lxàùn 'leave behind'	'#nǎ/m tǎ [ '#nǎ/m tV] 'leave alone'; !ǎo kV 'leave behind, remain'; !lxǎo 'infant at home'	!ka 'alone' [S1]; !hí: 'alone' [S1]		
	g. II.2(4)	dance (women)	*#ǎ [PK, PKK]	#nǎǎ-s			*#ǎa (*#ǎa) [PWKAlK]	n amm [vi]; n ǎmǎm [S]; n ǎmǎm [C]	!nǎ/m	#ǎa: [S1];		
EC	h. II.2(1)	black, dark night	*#Nu [PK] 'black': *#u [PKK]	#nǎù [N]; #nu-!nu [!Ora]	n#ùú 'dark, night' [Nar]; n#gú(-kyao) 'be dark' [Khwe]	ju(nye) 'dark-ness'	*#nu (*#u) [PKAlK; PWK], *#nju [PEK]	(n#ù [adj]; jó [vi]) [loans?]	!nyé 'night'	? (!ho [S1]), ? (!kǎé [S2])		
n in hoan?]	i. I.5(2)	throw, hurl		!nǎmǐ				n ǎmi [vt]	!gǎ/m	!gabɛ-tǎn [S1]		
EC	j. IV.2(12)	yellow, brown		!nǎú-b 'red ochre'	!lxau [Nar- Ba]			!lgǎú [N3]; gǎ'u [Ju 'hoan]; tšǎo, tšxau [!Xǎn-N]	!lgǎ'u (ká)			

no	gloss	PK: PKK	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	PKaK; PWK, PEK	Ju 'hoan	!Xóǀ	[Xam	#Kho- mani	N uu
k. IV.2(14)	shine		!nǎǎn [!nǎ]		llkhaie;  khaa		llʔǎn	llǎǎ ('glow (of lion's eyes)')	kǎi; ǂxi: [S1]		
l. I.1(13)	duiker		nǎǎn-s [  nǎu-b/s],  ʔanu-s [D, Hm]	nǎǎ [Nar]		* ǎu [PKaK]	ʔǎu [ha/hi -]		nau [S1]		

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## **APPENDIX. Preliminary notes towards the reconstruction of the SAK ancestral language.**

### **Synopsis.**

Preliminary suggestions are made concerning the likely shape of the basic underlying stem as it might have been found in an ancestral form of 'common southern African Khoesan'. A model is then presented in which the clicks can be accounted for as emergent segments, precipitated by a multi-factorial combination of processes. This model is seen to offer in addition an explanation for the Back Vowel Constraint. An example of a likely click underlier is then proposed as the kind of member that should be projected for the inventory of proto-segments in the 'remote common ancestor' of the SAK languages, on the basis of specific cases where clicks are known to have emerged. Even this small example case has the potential to explain systematically some of the patterns of alternation involving *positional* click type in cross-SAK comparative series. Specific examples of reconstructed words that might include this segment as their initial are seen to account for some of the *characterizations* (i.e. feature specifications) of clicks, while also permitting systematic explanation for some of the patterns in which these 'accompaniments' participate in cross-SAK comparative series. A final subsection elaborates on the potential of the proposed underlier and stem pattern to account for some of the click characterizations associated with voiceless nasal airflow, as well as their 'quirky' patterns of alternation in comparative series..

### **APP.1. Introduction.**

Phonetic alternations that are seen to recur repeatedly across comparative series of semantically related words may be given a sequential interpretation and represented *in the abstract* as 'sound shifts', which can be given statement in terms of the formulae known as 'sound rules'. However, in the case of languages that do not necessarily all branch from a single recent node, it may be mistaken to interpret such visible phonetic alternations as actually progressive horizontal shifts. Such alternations will not necessarily have any directly obvious mechanical basis, since they may have been mediated by a number of different diachronic processes, at a number of intervening stages. In such cases it may be more appropriate to show how the different reflexes may have arisen vertically from a projected common underlier - albeit possibly via different pathways. Since it seems reasonably clear that any unity of the SAK languages probably involves branchings at different nodal levels, it is the intention in this section to offer a tentative preliminary sketch of some of the underliers that might ultimately be common to the southern African Khoesan languages.

The sketch-model that is tentatively proposed here has a number of components to it.

(i) A basic underlying stem pattern is suggested (to be modified at a later stage following presentation of other evidence).

(ii) A model of click emergence is proposed.

(iii) A 'sample' segment is suggested for membership of the ancestral language's phonetic inventory, and the consequences are explored of projecting a conventional, non-click consonant as the underlier of some of the presently seen clicks. The example case is set up on the basis of known examples of click emergence (as will be discussed).

(iv) Further discussion then elaborates on the general explanatory capacity of the kinds of underlying roots that have been proposed, i.e. stems of the basic pattern type, with initials of the kind proposed in (iii). The discussion focuses in particular, and in more detail, on the kinds of click characterization associated with voiceless nasal airflow.

It is perhaps necessary to emphasize that although frequent reference will be made to processes found in Bantu languages, these references are for *illustrative purposes* only, and are made purely because these Khoesan-neighbouring languages offer the most convenient analogies for the purpose. Although there is some evidence that might indeed be construed to suggest an actual link between the SAK languages and the Bantu languages, this is plainly a controversial topic, and the point is not pressed here. (Some may balk at the supposed problem of 'time depth'<sup>1</sup>; while others may prefer to interpret all signs of commonality as the outcome of diffusion.) The suggestions made here should be taken to imply only that very similar (or 'parallel') processes appear to have been involved.

#### **APP.2.. A suggested basic stem pattern. (Preliminary version.)**

At this preliminary stage it is sufficient to propose a basic underlying stem pattern of the very general type  $C_1V_1(N)C_2V_2$ . No doubt there would also have been a few inherited morphemes of a monosyllabic nature, and possibly others with inherited extensions, but it is the pattern sketched here that will be focused on primarily.

It will be seen that the formula provides for a medial NC cluster – and it may well be objected that there is no evidence for this in extant Khoesian. However, the prenasalized form of the medial consonant is motivated by reference to the evidence of Table 15b, where it is clear that the ‘Bantu-like’ equivalents of many of the Khoesian words in fact contain such medial NC clusters.

Needless to say, some process of simplification would then have to have operated diachronically to reduce this ‘original’ cluster. Reference to Table [VI]6 offers some slight evidence that a process of NC simplification is (or was) indeed formerly operant in at least a few Khoesian languages. It will be noted in series (I.3.12) that several of the !UI-TAA varieties offer similar words for ‘like, love’, e.g. !Xóǝ *tsāha* or N|uu *ts'a<sup>n</sup>a<sup>n</sup>*, where the stem is recognizably Bantu (cf. Swati *-tsāndza* or Zulu *-thanda* < PB \*-tanda.). The Khoesian words may well be loan items in this instance – i.e. rather than intrinsic to Khoesian – yet there is no immediately obvious Bantu source that offers the word with the medial NC cluster *already* simplified. The implication is that processes in the Khoesian varieties themselves may have operated to effect the reduction of the nasal cluster. It is particularly noteworthy that the medial cluster in the Swati word, *-tsāndza*, features what has been described in the past as a ‘breathy-voiced’ affricate, as indicated by the subscript diacritic. This analysis has more recently been revised (Traill, Khumalo and Fridhon 1987), yet even so it seems remarkable that the !Xóǝ version, *tsāha*, should feature a breathy-voiced vowel – in apparent preservation of a breathy-voiced feature that might have characterized the single remaining member C of the original NC, prior to its that own subsequent loss.

A few more details concerning this proposed basic stem pattern will be filled in at a later stage. Clearly some explanation is needed, as just noted, for the subsequent simplification of the hypothetical NC<sub>2</sub> cluster, which does not actually occur in typical Khoesian stems. There are various well-known rules in Bantu which achieve such reductions, typically in contexts where the medial NC cluster is preceded, however, by another NC cluster in initial position, i.e. at the boundary of a prefix and the stem initial.



### APP.3. A model of click emergence.

Some evidence has been raised during the course of earlier discussion (Ch. VI.2) to suggest that the ultimate underliers of the clicks may be conventional non-click segments. It has also been seen (Ch. III. Pt. 2.4.i) that a proto-inventory projected to contain clicks as original members is uneconomical, and hence undesirable in principle. A tentative theory of click genesis is therefore sketched next. It naturally counts in favour of any model if it turns out to have additional explanatory power, and the model offered here will be seen to offer in addition an explanation for the Back Vowel Constraint.

As noted previously, a click is a special type of double articulation where an occlusion seals off part of the space between the anterior and posterior constrictions. (The click sound is the acoustic effect of the ‘suction-breaking’ necessitated since initial release of the occlusion is associated with a transient pocket of rarefied air.) The anterior closure involves a single articulatory target confined essentially to the dental or post-dental region.

In order for clicks to emerge, therefore, it seems that the following may be required:

- i. a process that ‘shifts’ the intended target of articulation for a range of segments to the denti-alveolar or alveolar region;
- ii. a process that gives rise to a secondary posterior articulation; and
- iii. a process responsible for the occlusion.

Examples of suitable processes that might contribute each of these factors can readily be found in the Bantu languages that neighbour on the Khoesan languages of southern Africa, and these are discussed in turn below. The processes concerned are:

A Kwanyama-like process of Alveolar Realization.

A Karanga-like process of Labiovelarization.

A Sotho-Tswana-like process of Alveolar Stopping.

It is emphasized yet again that the illustrations from Bantu are raised as useful *analogues* of the kinds of processes that might have been at work in Khoesan: such reference to common processes in Bantu languages should not be construed literally as a claim that the processes hypothesized for Khoesan were necessarily Bantu as such.

### APP.3.i. A Kwanyama-like process of Alveolar Realization.

This is a process that sees original voiced labial and velar stops (PB \*b, \*g) realized as alveolars in Kwanyama when they are followed by outcomes of the front or back Proto-Bantu vowels of first degree aperture (PB \*i, \*u). (The result is a neutralization in these environments of the contrasts between labial, alveolar and velar voiced stops.) It has been seen that the Khoesan languages appear to have a Kwanyama-like process of Alveolar Realization already operating: the process may account in part for the rareness in Khoesan languages of labial *initials*, and also accounts for shifts of the type [b~d] seen medially in KHOE stems.

### APP.3.ii. A Karanga-like process of Labiovelarization.

The reason for referring here to Labiovelarization specifically as a ‘Karanga-like’ process, is that in older varieties of Karanga, the resulting secondary articulation was reported by some authors to be heard as an intervening velar or palatal fricative (cf. the examples in Fig. App.1 below), and may be said to have resulted in nearly a true form of double articulation.

Processes of Labiovelarization have operated extensively throughout languages of the southern region, to induce a diversity of effects that range from the emergence of a set of labialized consonants in Sotho and Tswana, as well as other languages of the region - to the kinds of ‘velarization’ found to a varying extent across the many different dialects of languages such as Zezuru and Karanga (as described in the works of older authors prior to unification of these groups into ‘Shona’). As Gowlett (2003) notes, ‘all Zone S languages have a parallel set of ‘labiovelarized’ consonants’. Although the effects may differ from one language to another, the common factor is the lip-rounding (labialization) associated with back vowels, which induces raising of the back of the tongue (velarization).

While the segments typically affected *tend* to be bilabial, alveolar segments can also be labiovelarized in this way. In the table below, the data for a specific dialect of old Karanga are from Louw, who used the symbol ‘ $\bar{g}$ ’ to indicate what she described (1915: i), perhaps not very informatively, as ‘a very soft guttural sound, pronounced partly in the palate’.

In addition to demonstrating the emergence of labialized consonants and semi-vowels, the examples below reveal how, under certain conditions, a bilabial segment may even seem to give way to an emergent velar segment, cf. words for ‘moon’ and ‘child’.<sup>2</sup>

**Fig. App.1.** Examples of ‘Labiovelarization’ in Karanga, with additional material supplied for comparative reference.<sup>3</sup>

underlier	gloss	Karanga	Venda	Tswana	Swati
* deity of cult at Malungudzi, Zimbabwe	a spirit (specific name)*	Mǧali	Mwali, Dwali	-	-
* mǔ(j)ána	child	mǧana	mwana, ŋwana	ŋwana	um-ntfwana
*mòì	one, some	mǧe	-mwe, -ŋwe	ŋwe	-nyé
*-múa	suck, drink	-mǧa	-	-nwa	
?	spirit, breath, air	mǧeya	muya, mwiya	mòea	ú-môya
*i-bùè	stone	bǧe	mmbwe	le-ntfwè (ma-yè)	lí-the
*mǔ(j)édi	moon	mǧedzi	mwedzi, ŋwedzi	kgwedi	(i-nyañá)
*mbúa	dog	mbǧa	mmbwa	mpya, ntfa	i-nja
*-(j)ána	small child	(r)gwana [Cl. 11]	ŋwana	ŋwanyana	-
?	river (flowing)	(r)gwizi [Cl. 11]	?	-	
?	(be) cold	(ya no) (r)gwando [Cl. 11]		-	-bándza
	(cf. cold [n])	(chando)			

**Note to Fig. App.1** In the case of the Tswana examples, the letter ‘w’ is the orthographic representation of a labialized consonant. Where a reconstructed underlier is available, it often gives a good indication of the *back vowel source of the original labializing influence*.

It may be asked whether there is any evidence to suggest that such a process of Labio-velarization might have operated in the Khoesan languages. There is indeed: and it takes the form of the semi-vowel intrusions seen in some Khoesan languages. These are similar to those seen in the Karanga examples above, and may be interpreted as the vestigial traces

of such a process having been in operation. (They are not held out as actual ‘proof’, but merely as suggestive evidence.)

The cases of semi-vowel intrusions in Khoesan will be discussed below; but to back-track slightly first, it seems appropriate to consider an early observation of Traill’s, concerning certain patterns he detected involving the epenthesis of a vowel (or semi-vowel) in sequences of the type VV. Traill (1986b) referred to various words from his sets of cross-SAK items, and described this pattern as an ‘equivalence’:

‘between V and VV sequences in words like ‘crow’, ‘python’, ‘unroll’ (Appendix 1), ‘bark [n]’ (Appendix 2) via a process which copies V<sub>2</sub> after V<sub>1</sub> in CV<sub>1</sub>CV<sub>2</sub> sequences.’

The examples he gave originally are set out below, but in more current representations, where possible.

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in !Xóǝ are used in the sense of ‘bark-string’, and are probably Bantu (cf. Tswana [kxhǝlɛ], Kgalagadi *qholé* < PB \*gòdí).

In itself, the phenomenon of apparent vowel epenthesis is not particularly unusual - a similar pattern being commonly seen in Bantu languages, as in the case of the following series illustrating three south-western languages and two languages of the Caprivi region:

**Fig. App.3.** Examples of semi-vowel emergence in selected Bantu languages.<sup>4</sup>

gloss	PB	Herero	Kwanyama	Ndonga	Mbukushu	Yeyi
crow	-	ekoara	ekola	ekóla	-	-
python	*-bòmà	ombómi	ombóme	ombóme	mboma	imbwama

This kind of intrusion in Bantu languages is sometimes explained in similar terms as a ‘vowel repetition rule’. For example, Baumbach (1997, from whom the example above for Yeyi is quoted) described just such a process in Yeyi as follows:

‘The copying of the vowel of the last syllable into the penultimate syllable of a word, with concomitant consonantalization of an original \*o in that syllable, is a characteristic of Yeyi.’

However, just as this kind of rule statement leaves unexplained several aspects of the broader phenomenon in Bantu languages, so the concept of an harmonic vowel epenthesis fails to account for various other seemingly related patterns in Khoesan. Some of these additional patterns are visible in items from Traill’s own lists. The table below shows a pattern, for example, where a low back vowel is interpolated after V<sub>1</sub> in the sequence C<sub>1</sub>V<sub>1</sub>C<sub>2</sub>(V)<sub>2</sub> - where there is either no V<sub>2</sub> (the final vowels in *som-i* ‘shade’ and *dom-i* being gender affixes, and not part of the stem), or where V<sub>2</sub> would predict epenthesis of a front vowel (as in the words for ‘tickle’).

**Fig. App.4.** Additional patterns in Trill's data that his vowel-copying rule does not explain.

gloss	Nama, Dama +; !Ora	Khwe; Naro	Hie-Chware	Ju 'hoan	E. #Hoan	!Xóǀ
upper lip [AT1]	?	tsuam [  Gui]; ts'um [  Gana;   Ani]	ts'um [Kua]; tš'um [Kua]	dzuũ	džuam	dzum
shade [AT1]	som-i	sum [Nar]; sum [  Gana]; som [Buka]	suam [Khute]; šum [Tyire]			sum
swallow [AT1]	tom	tum [Nar]; tom [  Ani]	tyuam [Khute]	gu/m 'eat dry food' [doubtful in series?]		gum(ka) 'eat dry food' [doubtful in series?]
throat [AT1]	dom-i	dum [Nar]; dyuam [  Gui]; dom [  Ani]	dyuam [Khute]; dum [Kua; Tyire; Deti]	dum		' nyum
tickle [AT2]	guli guli, k <sup>h</sup> ǀli k <sup>h</sup> ǀli [Nar]; yali (tsitsi) [  Ani]	ngyale ngyale [Khute]			nggo nggole	qǀle qǀle

Further to this – and looking further afield in Khoesan - a process of apparent semi-vowel intrusion is also a well-known feature of |Xam. In cross-!UI comparative terms, the phenomenon was described by Hastings (2001) as:

'a correspondence between the back glide *w* following the initial consonant in |Xam and  $\emptyset$  in |Auni'.

The following table is based loosely on the set presented by Hastings in a three-way comparison that involved |Xam, |Auo and !Xóǝ; but with data here added for #Khomani as available, plus comparative series for a few extra terms ('arrow', 'river', 'wind', 'stone', 'ostrich', 'meat').

**Fig. App.5.** Patterns of apparent glide intrusion in !UI-TAA.

	!UI	!UI	!UI	TAA
gloss	Xam	#Khomani	Auo <sup>6</sup>	!Xóǝ
[to] cry, call	kʷa	kxʷa ~ kxʷa [Ma]	kʷa:	kxʷaa
[to] drink	kʷwā, kʷwē, kʷa:a	kxʷwā, kxʷwē ; kxʷā, kxʷēi [Ma]	kʷāā, kʷē	kxʷāhā [kxʷahV]
brown hyena	!gʷāi	!lgaĩ 'wolf' [Ma]	!kāin	g!qháli [ih/èh]
arrow	!nwa:	-	!kɔa	
child	ɔpwa 'baby' [S1]; !kwa 'child'	-	ɔpwa, !kwa	ɔaa [inal] [ih/ùh -tù]; ɔqâa [aI] [ih/ùh -nî]
water	!khôā [Specimens]	!khâ <sup>9</sup> [Do]; !khwa ~ !kha [Ma]	!kha	!qhââ [èh]
river	!kú(i)rri	-	!khuisi (Malopo)	
breast	!kwei	-	!kēi-si	g!qhèè [āh/āh]
wind, breath, soul	!kwé, !khwē	-	!kwe	!qhùè [èh/èh !qhûm-tê]
stone	!kwé [Specimens]	-		
ostrich	tto:i	toi, twe, tjwe [Ma]	ko:	qûje [èh/āh qûm]
meat	-	ɔkoe ~ ɔkoi [Do]; ɔkwoe [Ma]	ɔpwe	-

Although the analysis that invokes interpolation of a copied vowel might explain some of the examples immediately above (e.g. 'river'), the model fails to account for all of the cases (cf. 'hyena') In the case of the Bantu languages, it has long been recognized that an *alternative way* of interpreting semi-vowel intrusions is to see them as arising in the first



place under some type of labializing influence (such as association with a rounded back vowel *o* or *u*).

The emergence of the labialized consonants in the Sotho-Tswana languages was thus attributed by Tucker (1929: 80-81) to a staged process initiated in the first instance by the presence of some historical morpheme containing **o** or **w**, with subsequent loss of this conditioning segment. Tucker noted for the Sotho-Tswana languages (p. 30) that ‘the back vowels *u*, *o* and *ɔ* are accompanied by very pronounced lip-rounding.’ This induces an anticipatory effect that includes lip-rounding and raising of the back of the tongue ‘during the articulation of any foregoing consonants in the same syllable’. In some cases a progression may occur, where a rounded vowel [*u*, *o*, *ɔ*] lowers to *a*, in some cases leaving behind the traces of the rounded feature in a labialized consonant.

To sum up thus far: the presence of intrusive labiovelar semi-glides may be interpreted as evidence for the former operation of Labiovelarization. It seems reasonable to suggest, then, that Labiovelarizations of a similar kind might account for the instances of vowel or semi-vowel intrusions in Khoesan languages. A progression of this kind (i.e. /*o*/ > /*w*/) even seems to be implied by the variants given by Maingard for ‘ostrich’ in †Khomani as *toi*, *twe*, *tjwe* (cf. Fig. App.5 above). These show parallels with cross-varietal outcomes seen in the Bantu series presented earlier (Fig. App.1), such as the reflexes of PB \**i-bùè* ‘stone’, which appear in Karanga as *bḡe*, in Venda as *mmbwe*, and in Tswana as *le-ntfwè* (where the affricated outcome of the stem-initial in the last example may be attributed to the palatalizing influence of the Cl. 5 prefix).

### APP.3.iii. A Sotho-Tswana-like process of Alveolar Stopping.

The third factor seemingly required for clicks to be precipitated is some process that would be responsible for an occlusion between the two points of the double articulation. There is a process of Alveolar Stopping in languages of the Sotho-Tswana group, an *analogue* of which could potentially have provided the necessary factor.

In the case of these Bantu languages, this process produces a stopped allophone of the lateral alveolar approximant before the two vowels of first degree aperture (outcomes of PB \*i and \*u). As stated (1975: 28) by Cole:

‘The alveolar flapped vibrant d [phon. ɹ] is a member of the /l/ phoneme, and occurs only before the close vowels *i* and *u*. This sound is articulated by slightly retroflexing the blade of the tongue and then rapidly flapping it forwards and downwards so that the tongue-tip strikes the alveolus in the progress of this movement. After the momentary closure, the air may be released medially or laterally.’

Cole added his personal observation that younger speakers were increasingly using the ‘plain voiced alveolar explosive [d]’. Doke and Mofokeng (1985: 477) reported the flapped retroflex to be the norm only in Northern Sotho varieties, with the voiced alveolar explosive [d] being usual in both Tswana and Southern Sotho.

In connection with the possible action of such a process as part of the complex of factors involved in click precipitation, it seems notable that some Khoesan varieties feature a retroflex variant of the postalveolar click. Adding to the parallelism is the fact that the postalveolar click occasionally patterns in alternations with the lateral click.

It is noted, however, that the process of Alveolar Stopping, at least as it occurs in the Sotho-Tswana cases, typically affects an intervocalic segment. The implication is that the projected stem for ancestral Khoesan would have to have had a preceding vowel, presumably as part of preceding morphology. It is not altogether speculative to suggest that such morphology perhaps existed. Firstly, it is the case that at least the non-KHOE groups of the SAK languages in all likelihood once featured prefixes as the indices of their multiple gender systems (as witnessed by the traces of such prefixes in dialects of !Xóǀ and the extinct |Auo<sup>5</sup>). Secondly, the presence of such morphology could account for the anomalous distribution of the affricates, which only occur in stem-initial position. If stem-initial affrication was originally triggered by a conditioning phonetic factor, then pre-stem morphology would have to have existed to supply it. (Affrication is not uncommonly associated in Bantu languages with a preceding nasal environment or palatalizing vowel, which is typically contributed by present or formerly existing morphology.)

It may also be noted that an alternative or perhaps supplementary factor of ‘stopping’ is already intrinsically present in the case of affricates. If this is the source of the occlusion, then the possibility arises that the immediate click underliers need not necessarily be alveolars (or secondary alveolars) but might also include *palatals*.

APP.3.iv. Further discussion of the model of click emergence.

The three main processes described above as potential contributors to click emergence appear to dovetail, in that:

- \* A Sotho-Tswana-type process of Alveolar Stopping requires an alveolar segment as its input, and one of the conditions triggering it is a following (close) *back vowel* (since it is triggered by reflexes of PB \*i or \*u).
- \* A Kwanyama-type process of Alveolar Realization alveolarization (i.e. shifting of voiced labial and velar segments to an alveolar place of articulation) has the potential to provide additional secondary alveolar ‘inputs’ to the process of Alveolar Stopping; while, moreover, one of the conditions triggering it is similarly a following (close) *back vowel* (since it is triggered by reflexes of PB \*i or \*u).
- \* A Karanga-type process of Labiovelarization, which may affect both labial and alveolar segments - and which may be associated in an extreme form with a secondary posterior articulation - is associated with following *back vowels*.

It seems possible in principle that analogues of these three (or four) natural processes in combination might be sufficient to trigger the type of double articulation with intervening occlusion that results in the precipitation of clicks from alveolar segments (whether the latter are primary, or the secondary outcomes of neutralizations).

The concerted action of such processes would additionally provide a natural explanation for the ‘Back Vowel Constraint’. Not only is the back vowel environment responsible for delivering some of the Alveolar Realizations as ‘inputs’, but it is crucially necessary to induce Labiovelarization and hence, if the theory is correct, the secondary posterior articulation. It might therefore be seen as a necessary part of the environment associated with click genesis. The fact that Khoesan languages occasionally present click-initial stems containing front vowels (as do the Nguni languages) can perhaps be explained as the

consequence of subsequent fronting and raising of the vowel that is permitted in the case of the ‘front’ clicks ([ǀ] and [ǃ]), in certain environments (typically a following high vowel or nasal). Such a process is implied by !Xóõ examples such as |é’ě ‘there’, which is entered by Traill (1994: 54) as a ‘variant of |á’n’.

Now that contributing *processes* have been identified that might have worked in concert to create the pre-conditions for click emergence, the question arises what the underlying inventory of *segments* might have looked like in the ‘pre-click’ stage. An attempt will be made to offer some partial answers to this question in the next section.

#### **APP.4. Projection of a sample underlier for selected positional types of click.**

In order to avoid an unduly speculative approach, this section of the work is limited to consideration of a few clearcut cases where click emergence is known. This permits the setting up of only one sample of an ordinary (non-click) consonant that might be projected as a click underlier in ancestral Khoesan. Even this small example case will be shown, however, to have a wide explanatory potential.

It has long been recognized (cf. Appleyard 1950) that many, if not all, of the click words in Nguni languages are basically Bantu - i.e. are seen to alternate systematically both internally and cross-linguistically with very similar words that can be derived incontrovertibly from Proto-Bantu. However, it has only very occasionally been acknowledged that some of these words have ‘dual-citizenship’ – i.e. are members of both Bantu and Khoesan languages. Examples include words for ‘urine’, ‘sprout’, ‘shake, rinse’, and ‘smile, kiss’ – but there are others. It is material of this special kind that will be drawn upon here, since the underliers of the click segments in the Bantu-intrinsic members of such sets have already been projected and are well-established. In particular, Bantu-intrinsic words in Khoesan provide useful evidence on which to base initial suggestions concerning a possible underlier for the *lateral alveolar click*.

APP.4.i. A non-click underlier for the lateral alveolar click.

To begin with, reference is made to a series of Khoesan words for ‘urine’ (I.3.16), given in comparative Table VI.6, and shown again below:

**Fig.App.6.** Words for ‘urine’ in Khoesan languages.

gloss	PK	Jul’hoan	!Xóǀ
‘urine’	* xam	g xám	llqǀhám

These words markedly resemble the equivalent word in Xhosa, which is the click-initial *um-|hamo* – and yet which is intrinsically Bantu, as reference to the corresponding word in Tswana, *mo-tlhapò*, makes plain. The Xhosa and Tswana words are euphemistic, arising by nominalization from a word meaning ‘wash, cleanse’ (and also ‘swim’), reconstructed for Proto-Bantu as \*-càmba. As the reconstructed underlier reveals, the original segment is a voiceless palatal stop, which may have a *lateral reflex* in one Bantu language (cf. Tswana), and a *dental reflex* in another (cf. Venda), as shown next:

**Fig.App.7.** Words for ‘urine’ in southern Bantu languages.

gloss	PB	Venda	Tswana	Xhosa
‘urine’	*-càmba	-tǎmba	mo-tlhapò	um- hamo

The pattern of the Bantu alternations rather strikingly mirrors the Khoesan alternations in Fig.App.6, where *lateral* and *dental* clicks are seen to alternate.

That the parallel is not accidental is suggested by the fact that a few further instances seem to bear it out, as shown in the following examples. It will also be seen that in the case of the Bantu-intrinsic members of each set, it is again in each case an original \*c that has been postulated as the initial segment.

**Fig. App.8.** Words for ‘branch’ in Khoesan and Bantu languages. <sup>6</sup>

gloss	Khoekhoe	Ju ’hoan	!Xóǀ		
‘branch’	llnǎún-b [llnâu-b]	ll’háú	g kx’ābu (‘leafy’); nǎu (‘small’)		
gloss	PB	Yeyi	Zulu, Xhosa	Venda	Cewa
‘branch’	*N-cǎmbò [?] (*cǎndú)	englamu	-hlamvu	ǎmvu	tsamvu

**Note to Fig. App.8** The Venda word is perhaps semantically rather distant, really meaning ‘fruit (of the *mu ǎmvu* tree)’.

**Fig. App.9.** Words for ‘side, edge, tip’ in Khoesan and Bantu languages.

gloss		Ju ’hoan	!Xóǀ	
‘side, tip’		glà’á	llqháa, llqhǎǎ (of spear’) sǎ’ǎ (of axe)	
gloss	PB	Sotho	Xhosa	
‘side, tip’	*N-cá	ntlha	i-nlla	

It may perhaps be denied that these few examples can be used as grounds for a general proposal that an ancestral \*c can be set up as an underlier for the alternating lateral alveolar and dental clicks of the Khoesan languages. No doubt it will be objected that the Yeyi word *englamu* is a borrowing from some or other Khoesan language (despite its obviously underlying Bantu identity); and perhaps it will be proposed – with the other words in mind – that these odd few instances of Bantu-intrinsic click words with counterparts in Khoesan should be ascribed to some singular form of diffusion.

However, there is a small amount of additional evidence to support a proposal that \*c is indeed a plausible remote underlier for some instances of both the lateral and dental clicks in Khoesan. Firstly, it was cautiously hypothesized above that click emergence in the case

of a palatal underlier might involve the type of stopping inherently associated with affricates (i.e. as the stopping mechanism necessary for the occlusion to occur). It is perhaps circumstantial evidence that the dental and lateral alveolar clicks are sometimes described as fricative clicks, in opposition to the two plosive clicks, namely the palatoalveolar and (post)alveolar.

Secondly, if the complete underlying root for the Khoesan words for 'branch' somewhat resembled the reconstructed PB words, PB \*N-càmbò or \*N-cándú, this would make it possible to explain a fairly extensive range of other phenomena in addition to the dental ~ lateral alternations, as listed below:.

- \* The realization of the lateral click with *nasalization* in the Khoekhoe ǀnǎǎn-b.
- \* The *voiced realization* g|kx'ābu in !Xóǀ, given that the tendency for prenasalized segments to become voiced is not uncommon in some languages.
- \* Noting also the ejective affricate accompaniment associated with the !Xóǀ click in g|kx'ābu, it is worth mentioning that in Tswana, the *voiced* palatal stop PB \*j is realized by an *ejective affricate when preceded by a nasal*. This affricate is [ts'] when followed by reflexes of high vowels, and [tʰ'] when followed by other vowels.
- \* The voiceless nasal airflow associated with delayed aspiration in the Ju|'hoan realization ǀ'háú. The explanation of the delayed aspiration itself will require some detailed discussion, which is reserved for a later section (APP.5). It may briefly be mentioned here that a language such as Tswana conveniently illustrates a case where the reflex of \*c in a prenasalized environment is the *aspirated lateral affricate* [tʰ].)
- \* The underlying presence of an initial NC cluster would provide the factor that triggered *dissimilatory processes* affecting either the first or the second NC cluster – leading in some languages (cf. ǀnǎǎn-b) to loss of the oral stop at C<sub>2</sub>; and in others (cf. g|kx'ābu) to loss of the second nasal. Both processes are well-known versions of Meinhof's Rule, with the second being known as the Kwanyama Rule after the language in which Meinhof identified it.

A third reason not to reject the examples above as isolated and inexplicable cases of some vague process of early ‘diffusion’ is that at least one other series does *not* seem to have click counterparts in a Bantu language, so that the click-initial version may probably be regarded as intrinsic to Khoesan rather than the result of borrowing:

**Fig. App.10.** Words for ‘squeeze’ in Khoesan and Bantu languages.

gloss	Khoekhoe	KalKhoe	Ju ’hoan	!Xóǀ
‘pinch, squeeze’	llkhǎm	x’ám; ts’ám’	tsxám	ts’kx’ám
gloss	PB	Xhosa	Swati	
‘pinch, squeeze	*-cama [Zone J]; *-káma	-khama	-kháma	

On the basis of this evidence, then, it seems reasonable to suggest that \*c should be set up as *one* of the original segments of ‘ancestral Khoesan’, and that *some* of the lateral and dental click reflexes should be mapped from it. In particular, it is probably this segment that underlies the patterns of Type I.3 [ | ~ || ] given in Main Table [VI]6. (The processes that might have led to the genesis of the click have already been sketched, and it is at least notable that the underliers of the equivalent words in PB all provide the back vowel environment which has been hypothesized as one of the necessary preconditions.)

It is granted that the small solution sketched above is unlikely to account for all instances of either the lateral or dental clicks in Khoesan. Where the lateral click patterns with some of the other positional types, this may be a clue to the possibility that the underlying segment in these cases is something other than \*c. (It is also possible, moreover, that \*c itself has other positional reflexes.)

Even though just one segment has been proposed here by way of a ‘trailblazer’, it is hoped that the value and explanatory potential of setting up non-click underliers more generally has been shown. A complete set of such segments would not only permit a more



conservative proto-inventory than one filled with clicks, but would also be smaller and neater since the possibility has now been raised that the so-called ‘accompaniments’ may also be explained in terms of derivations from a simple set of underliers. (This point is developed further in the final section below.)

It is acknowledged that many of the finer points remain to be worked out – not least the other underliers. In particular, the triggers in some cases are still elusive. For one thing, it is still not clear why so many of the Khoesan languages should have minimal pairs consisting of a conventional non-click-initial word in addition to one or more seemingly related series with click-initials, where all of the necessary factors for click emergence to be triggered would seem to be present - and yet a click does not occur. (Words in the series for ‘sprout, flower, germinate’ provide a good example, but there are many others.) The likelihood is that latent (or former) morphology is involved, and it remains part of the task for much more extensive future study<sup>7</sup> to establish what this might be. For the present, the next step will be to try and account for some of the diverse click ‘accompaniments’.

#### **APP.5. Further consideration of some of the click characterizations.**

This section focuses on the kinds of click ‘accompaniments’ associated with voiceless nasal airflow, and the kinds of ‘quirky’ alternations known to involve nasalization, aspiration and voicing.

It was noted in the section above that the some of the click ‘accompaniments’ and even the patterns of alternation in which they occur may conceivably be explained by postulation (for at least some stems) of an initial NC cluster. It was also seen that the presence of such a cluster in the projected underlying word would offer a basis for satisfactory explanation of certain patterns involving stem medial segments (via the simplification of NC clusters).

It is therefore proposed that the idealized representation of the underlying stem pattern should be adjusted to permit the possibility also of an *initial* NC cluster:

$$(N)C_1V_1(N)C_2V_2$$

If the basic Khoesan stem is allowed to include an initial NC<sub>1</sub> cluster - where C<sub>1</sub> may equally be a click, it becomes possible to offer an explanation for the phenomenon of

voiceless nasal airflow associated with the delayed aspirated and glottalized clicks – by considering *analogous* phenomena in certain Bantu languages.

It is convenient for purposes of the discussion that voiceless nasals happen to be a familiar phenomenon in some of the southwestern Bantu languages, such as Ndonga and Kwanyama. These sounds are typically associated with the NC<sub>1</sub> clusters that arise at the boundary of Class 9 nouns where the stem-initials are voiceless stops. In the case of Ndonga, for example, Fivaz (2003) gives phonetic representations for such clusters as follows:

**Fig.App.11.** Showing the occurrence of voiceless nasals in NC<sub>1</sub> clusters in Ndonga, after Fivaz (2003). The voiceless stop is realized with aspiration. (Note that ‘w’ indicates a labialized consonant.)

mp	>	m̥p <sup>h</sup>
mpw	>	m̥p <sup>h</sup> w
nt	>	n̥t <sup>h</sup>
ntw	>	n̥t <sup>h</sup> w
nts	>	n̥ts <sup>h</sup>
nk	>	n̥k <sup>h</sup>
nk <sup>h</sup> w	>	n̥k <sup>h</sup> w

In the case of Kwanyama, as explained (2004: 14) by Halme:

‘it is not only the case that the nasals have been devoiced, as in Ndonga where there is a full series of voiceless prenasalized obstruents, but the obstruents themselves that caused the devoicing have disappeared altogether.’

The effects of this process in Kwanyama may be summarized as follows:

**Fig.App.12.** Showing the realizations in Kwanyama of NC clusters where C is a voiceless obstruent.

mp	>	m̥
nt	>	n̥
nty	>	ɲ̥
nk	>	ŋ̥

Here there can be no question of any ‘substrate influence’, since these nasals represent merely a variation on the broad theme of NC cluster simplification (cf. Schadeberg 2003), which is a phenomenon widely found throughout Bantu languages, and which occurs in contexts created by intrinsic aspects of Bantu morphology.

Similar patterns of NC<sub>1</sub> simplification are standard for languages of the Ambo group, and indeed for languages of the Kunene-Kubango region as a whole. Typically the participating oral segment is a voiceless stop, and often the consequence is loss of this stop, with assimilation of the nasal to the ‘place’ of the elided segment. (It is not uncommon for the outcome of the nasal plus velar combination to be merely a glottal fricative.) In some languages, on the other hand, it is the nasal that may ‘give way’ rather than the oral segment, and indeed a fairly diverse range of other effects may be seen. A still further variety of effects may be seen where C<sub>1</sub> is a continuant rather than a stop. While the nasal involved is typically associated with the Cl. 9 prefix, there are nonetheless languages where other morphophonology - such as elements expressing bound anaphors of the 1<sup>st</sup> person - may trigger similar phenomena (cf. Baucom 1972). Some languages may simultaneously show diverse effects additionally involving NC<sub>2</sub> - such as the Kwanyama type of dissimilation; while the possible permutations found in any one language appear to be even further multiplied by the fact that many languages of the region also participate in the ‘harmonizations’ that occur following the presence of a nasal in the stem, leading to perseverative nasal realizations of the alveolar segment in verb suffixes of the type derivable from PB \*-id- or \*-ud. A spectacular demonstration of multiple complex nasalization effects is provided by Umbundu (Schadeberg 1987).

The following comparative array is made up of data from old forms of Herero, Kwanyama and Ndonga, and illustrates only a few relatively simple outcomes of stem-initial combinations involving a nasal and a voiceless stop, i.e. NC<sub>1</sub>. Prefix-stem boundaries are

purposely not indicated, because it is one of the effects of such processes to blur the distinction between the phonetic material of the prefix, and stem-initial segments.

**Fig. App.13.** Words illustrating outcomes of stem-initial NC clusters in old forms of Herero and Owambo. (All data from Brincker 1891.).

gloss	Herero	Kwanyama	Ndonga
(bilabial)			
ostrich	-	oṃó	oṃp <sup>h</sup> ó
impala	-	oṃála	oṃp <sup>h</sup> ála
foot(sole), surface	ombáze	oṃási	oṃp <sup>h</sup> ázi
gnu	oṭji-mbúru	oṃúulu	oṃp <sup>h</sup> ugúlu
(alveolar)			
person	omú-ndu	omu-ṇu	omu-ṇí <sup>h</sup> u
cloth		oṇánga	oṇí <sup>h</sup> ánga
front, tip		oṇúlo	oṇí <sup>h</sup> úlo
? (palatal)			
vulture sp.	-	oṇuá	oṇts <sup>h</sup> úá
scar	oru-tja, ondja	oṇiá	oṇshá [pl] (olu-sha)
bee	oṇjütji	oṇíki (oṇjiki)	oṇjúshi
(velar)			
hare sp.	ongüíju	oṇüíju	oṇk <sup>h</sup> üíju
sandal	oru-káku	eeṇáku [pl] (olu-káku)	oṇk <sup>h</sup> áku [pl] (olu-káku)
pangolin	ongáka	oṇáka	oṇk <sup>h</sup> áka
guinea-fowl	ongánga	oṇánga	oṇk <sup>h</sup> ánga
dog (♀)	ongazé-ua	oṇádi	oṇk <sup>h</sup> ii-ṇtu
horse		oṇambe < oka- kambe	
tick	ongúpa	oṇúpa	oṇk <sup>h</sup> úpa

The Herero examples above incidentally illustrate cases where the effect of the prenasalization is to trigger *voicing* of the following segment.

A range of patterns involving the stem-initial NC cluster are seen in languages of the Luyana group. Lisimba notes (1985: 36) that the different behaviour of the voiceless stops in the nasal environment of the 9/10 prefix is indeed one of the factors distinguishing Luyana from the Luvale varieties:

‘Generally, Luvale drops prefixal nasals except before voiced consonants [hence \*mpuka > *puka* ‘bee’, \*mpoku > *poko* ‘knife’], while Luyana, on the other hand, drops voiceless post-nasal consonants: \*mpuka > *muka* ‘bee’, \*muntu > *munu* ‘person’. However, synchronic evidence from [eastern Luyana varieties, Mbumi and Mbowe] suggests that the consonants concerned have perhaps been assimilated to the prefixal nasal rather than dropped, thus \*mpoko > +mmoko > *moko*.’

On the acoustic impression created by the actual mechanics of such assimilations, it is intriguing to note Brincker’s observations (1891: 2) on a late 19<sup>th</sup> century variety of Ndonga (in the context of comparative work on Kwanyama, Ndonga and Herero):

‘A sound peculiar to these dialects, represented here by the symbols *m* and *n* in combination with the superscript diacritic [tilde plus subscript cedilla], appears in Ndonga in place of the sharp sounds *k*, *p* and *t*, which retain their sharp character when they have acquired a nasal, as *ñk*, *ñp*, *ñt* in *o-ñkóno*, *o-ñpázi*, *o-ñtúlo*, *omu-ñtú*, etc. This sound is very difficult to imitate correctly - seeming as if one has slightly swallowed the sound in the upper nose, to produce a nasal sound that does not seem to belong in the slightest to this language that is otherwise so euphonious.’

The resulting sound struck Brincker as so unusual that he actually proposed it as the likely origin of some of the clicks in the Nguni languages.<sup>8</sup>

Despite the characterization of such effects by Brincker as specifically south-western, at least mildly similar processes may be seen in other Bantu languages outside the Kunene-Kubango group. The examples below from Karanga (Marconnes 1931: 61-63) illustrate typical effects of such processes in languages of the Shona group:

**Fig.App.14.** Showing Karanga realizations of voiceless stops in NC clusters, after Marconnes (1931: 61-63).

N + p:	‘wind’	mepo	-peperera	‘blow’	PB *-pepo
N + t:	‘chisel’	nemo	-tema	‘cut’	PB *-téma
	‘three’	natu			PB *-tátù
N + k:	‘chief’	hosi			PB *-koci
	‘male’	hono	mu-kono	‘man’	-
	‘brother’	hama	hu-kama	‘relationship’	-
	‘firewood’	huni	ru-kuni (sg.)		PB *-kúni
	‘female’	hadzi	mu-kadzi	‘woman’	PB *-kádí
	‘guinea-fowl’	hanga			PB *-kángà

The illustrations given above have shown the wide range of outcomes that may be associated with an initial NC cluster. Amongst other things, it was noted above that the Herero examples (Fig. App. 13) show cases where the effect of the prenasalization is to trigger *voicing* of the following segment. This suggests a potential explanation, by analogy, for some of the apparent quirkiness of patterns involving nasalization, aspiration and voicing across the SAK spectrum - assuming that the underlying roots do indeed feature the possibility of an initial NC.

As the Bantu examples have shown: in cases where one language neutralizes the contrast between voiced and voiceless segments in some environments, such as a nasal environment, the surface patterns of alternations seen cross-varietally may then give the impression of being irregular, because *voiced* segments of that language may seem to pattern at times with *voiceless* or *prenasalized aspirated* segments of other languages in some cases, yet with *voiced* segments at other times. It might be added, lastly, that in the case of a language such as Tswana, reflexes of the voiced PB stops are *ejectives* in a prenasalized environment. A chart setting out the reflexes of Tswana is provided in Fig. App.15 [overleaf].<sup>9</sup>

**App.15.** The phonetic inventory of Tswana consonants, shown (in **bold**) as reflexes of PB proto-segments (without inter-stage mappings). The pretensions are based partly on Creissels (1999), with conditions for *uvular* reflexes based on analysis in Tucker (1929) and the Dept. of African Languages and Literature, University of Botswana (1999). Some additional information is from Cole (1975). The forward slash indicates an environment; curly brackets are used as shorthand for 'present-day outcome of the enclosed PB segment'. Ordinary parentheses indicate an optional element.

<p>[(f)-h] N/[p<sup>h</sup>] [s]/{*i, *u} [(w)]/{*i, *e; *u, *o} N/[ts<sup>h</sup>]/{*i, *u} N/[tʃ<sup>h</sup>(w)]/{*i, *e; *u, *o}</p>	<p>*t → [r] N/[t<sup>h</sup>] [s]/{*i, *u} N/[ts<sup>h</sup>]/{*i, *u}</p>	<p>*c → [tʰ] N/[tʰ] [s]/{*i, *i, *e; *u} N/[ts<sup>h</sup>]/{*i, *i, *e; *u}</p>	<p>*k → [x-h]/V[+high] N/[k<sup>h</sup>-c<sup>h</sup>]/{*i, *u} [s]/V[+front] N/[ts<sup>h</sup>]/{*i, *i, *e; *a}</p>	<p>*k → [χ]/V[-high, +back] N/[q<sup>h</sup>-k<sup>h</sup>]/V[-high, +back]</p>
<p>[b] N/[p'] N/[ts']/{*i, *u} [dʒ(w)]/{*i, *e; *u, *o} N/[tʃ'(w)]/{*i, *e; *u, *o}</p>	<p>*d → [d-l] N/[t'] (N)/[ts']/{*i, *u} [dʒ]/{*i, *e; *u, *o}</p>	<p>*j → ∅ N/[tʰ'] (N)/[ts']/{*i, *i, *e; *u}</p>	<p>*g → ∅ N/[k'-c']/V[+high]</p>	<p>*g → ∅ N/[q']/V [-high, +back]</p>
<p>[m] [ɲ]/{*i, *u} [ɲ]/{*i, *e} [ɲw]/{*u, *o}</p>	<p>*n → [n] [ɲ]/{*i, *u}</p>	<p>*ɲ → [ɲ] [ɲ]</p>	<p>*ŋ → [ŋ] [ɲ]/{*i, *u}</p>	

**Notes to Fig.App.15.** i. The morpheme of the Class 5 prefix (?< PB \*i-) may induce alveolar and palatal realizations similar to those triggered by following environments. ii. The symbol *w* indicates labialization. iii. The only regularly voiced plosive is [b].

... follows p. 352

If the ‘delayed aspirated’ and ‘glottalized’ click characterizations associated with voiceless nasal airflow were to be treated as special types of the ordinary features [+aspirated] and [+ejected] associated with a prenasal environment, this would permit a simpler and better integrated model overall. Given its explanatory potential, it is suggested, then, that the underlying basic stem pattern for ancestral Khoesan should indeed be of the type sketched earlier as (N)C<sub>1</sub>V<sub>1</sub>(N)C<sub>2</sub>V<sub>2</sub>.

#### **APP.6. Concluding remarks.**

While many aspects of the model sketched above will have seemed speculative, they have not been unmotivated, while an attempt has been made to show that the proposals have extensive explanatory power, as recapitulated below:

The model of *click genesis* has offered to account for the emergence of at least some of the positional click types from conventional underlying segments within a desirably simple proto-inventory, as the result of a multifactorial event involving the rare intersection of a number of natural processes. The mechanisms which the model proposes additionally provide a natural explanation for the ‘Back Vowel Constraint’. The sample *non-click underlier* proposed for the proto-inventory has been shown to allow an explanation for at least some of the alternation patterns involving different positional click types.

The proposed *basic stem pattern* permitting an initial NC cluster has suggested a potential explanation for the emergence of some of the click ‘accompaniments’, including the voiceless nasals and associated phenomena such as delayed aspiration and glottalization; The model has also offered an explanation for the ‘quirkiness’ of patterns involving aspirated and ejected clicks, which may be associated with nasalization, and may in addition pattern with voiced segments. Lastly, the proposed stem pattern permits an explanation for stem-medial alternations involving counterpart oral and nasal stops.

The model is by no means complete, and there are many intricate puzzles that remain to be unravelled. For the present it is offered as the first approximation of a simple and natural solution that promises a fairly comprehensive explanation for phenomena observed across the spectrum of the southern African Khoesan languages.<sup>10</sup>



## NOTES.

1. It appears to be a belief still firmly held by some archaeologists that there is 'linguistic' evidence to support the notion that speakers of Bantu languages only made their appearance in the southern part of Africa around two millennia ago. Huffman, for example, states with great certainty (2006) that:

'Bantu-speaking people moved into East and southern Africa about 2000 years ago.'

Certainly it was formerly a popular belief that evidence of a spreading 'iron age' technology could be linked to the movement of an early immigrant population of Bantu-speaking people. However, the notion that there are any terms reconstructible for Proto-Bantu that can be pinned to specific material signatures has now largely been dispelled by linguists (cf. discussion by Nurse and Philipson 2003). What is more, a few contemporary archaeologists (e.g. Robertson 2000) have themselves begun to revisit the rational alternative possibility of diffusion as the source of spreading technology, rather than literal immigration.

It is worth recalling that part of the very impetus for the 19<sup>th</sup> century colonial romance of a late Bantu 'invasion' came in the first place from a blind assumption that there simply could not be any link between the supposedly primordial 'click languages' still spoken by a few remnant communities of 'Stone Age' people - and the languages spoken by members of the more advanced 'Iron Age' societies around them. One scholar of the period in fact ventured the contrary and bold opinion (Appleyard 1850: 17) that:

'if it were possible to divest these languages of their uncouth and jargonish sounds, which totally disqualify them from becoming successful media of instructive communication, and restore those for which they have been successively adopted, they would perhaps prove to be in closer alliance with some other African tongues, than is usually imagined.'

Appleyard's pejorative tone is obviously unseemly, and plainly belongs to another era and another culture. But it is something of a pity that the greater possibilities implicit in his view do not seem to have been more widely entertained.

2. It seems possible that similar processes may have underpinned a sound-shift seen in the Rumanyo languages of the Caprivi region - Mbukushu and Gciriku - and to a minor degree in certain concordial morphemes of various south-western languages. The pattern involves the emergence of a voiced velar fricative [ɣ] (written 'gh') as the reflex of PB \*b when followed by a back vowel (most commonly *u* or *o*, but occasionally also *a*). These reflexes are typically seen in the prefix of Cl. 14 (< PB \*bù- ) which appears in Mbukushu as [ɣu] and Gciriku as [(ɣ)u], and in the concordial morphemes (i.e. dependent pronominal morphemes) for the plural Classes 2 [< PB \*bà-] and 6 [< \*PB mà-], which appear in both as [ɣa]. The same shift is also seen in a few lexical items, e.g. *ngugho* 'kaross' (< PB \*-gubo) in Mbukushu, and *ndjũgho* 'house' (< PB \*-jũbo) and *ka-ghúvi* 'spider' (< PB \*-bũbũ) in Gciriku. [REFS].

3. Sources of the comparative data: **Karanga**: Louw (1915); **Venda**: Van Warmelo (1989); **Tswana**: Brown 1982); **Swati**: Rycroft (2008).

4. Sources of data for the Bantu languages illustrated: **Old Herero, Kwanyama, Ndonga**: Brincker (1891); **Mbukushu**: Wynne (1980); **Yeyi**: Baumbach (1997).

5. These may be seen in Dorothea Bleek's vocabulary (1937) for |Auo.

6. Sources of the data: **Yeyi**: Legère (1998); **Cewa**: Zambesi Mission (n.d.)

7. It is my hope that it will be possible in future for me to work with Africanists of an open mind, with whom I will perhaps be able to debate and develop some of these ideas.

8. It has been tentatively suggested to me (in personal communication) by Roger Lass that Brincker may have been describing nasally exploded stops. (He adds that it is not possible to make any firm statement without having heard the actual sounds.) The particular dialect of Ndonga recorded by Brincker may no longer be extant.

9. It has occasionally been suggested that certain aspects of the Sotho-Tswana phonetic inventories are perhaps attributable to the influence of a vaguely defined 'Khoesan

substrate' (e.g. Herbert 2000) However, it seems almost redundant to propose any such influence (hard to motivate, in any case) when every aspect of the modern Sotho-Tswana inventories - with the possible exception of the (post)alveolar clicks of Sotho – may be accounted for in terms of conventional mappings from a standard ancestral inventory.

10. Güldemann and Stoneking (2008) offer a model of click emergence that proposes the recruitment of these sounds from the paralinguistic domain (where they may be used for interjective or affective purposes) initially into a marked register - e.g. for purposes of lexical disguise - from which they gradually 'spill over into the "normal language", eventually consolidating and gradually expanding both in the phoneme system and across the lexicon.' The trouble with this model is that it: (i) invokes an unusual process; (ii) lacks additional explanatory capacity; (iii) would seem to predict a greater randomness of click distributions than is actually seen in comparative data; and (iv) seems to imply that languages of this kind would gradually have managed to develop and 'add on' very much the same sets of characterizations that may arise by integral, systemic processes in other languages.

## REFERENCES.

- Aikhenvald, A. and R.M.W. Dixon (eds). 2006. *Serial Verb Constructions: A cross-linguistic typology*. Oxford: Oxford University Press.
- (De) Almeida, A. 1994. *Os Bosquimanos de Angola*. Lisbon: Instituto de investigação científica tropica.
- Anders, H. 1934-1935. 'A note on a South Eastern Bushman dialect'. *Zeitschrift für Eingeborenen-Sprachen* XXV: 81-89.
- Appleyard, J. W. 1850. *The Kafir Language*. King William's Town: Wesleyan Mission Printing Establishment.
- Awoyale, Yiwola. 1986. 'Reflexivization in Kwa languages.' Pp 1-14 in G. J. Dimmendaal (ed.): *Current Approaches to African Linguistics* (Vol 3). Dordrecht: Foris Publications.
- Barnard, A. 1985. *A Nharo Wordlist*. Occasional Publications 2. Durban: Department of mAfrican Studies, University of Natal.
- Bastin, Y. and T. C. Schadeberg. *Bantu lexical reconstructions 3*. Tervuren Band Leiden: website, [Bantu Lexical Reconstructions](#) (as updated 2005).
- Batibo, Herman and Joe Tsonope (eds). 2000. *The State of Khoesan Languages in Botswana*. Mogoditshane, Botswana: Tasalls Publishing and Books.
- Baucom, K. L. 1972. 'The Wambo languages of South West Africa and Angola.' *Journal of African Languages* II (2): 45-73.
1974. 'Proto-Central Khoisan.' In E. Voeltz (ed.): *3<sup>rd</sup> Annual Conference on African Linguistics*. Bloomington: Indiana University Publications.
- Baumbach, J. M. 1997. 'Languages of the Eastern Caprivi.' Pp 307-451 in W. H. G. Haacke and Edward E. Elderkin (eds): *Namibian Languages: Reports and Papers*. Cologne: Rüdiger Köppe Verlag.
- Beach, D. M. 1938. *The Phonetics of the Hottentot Language*. Cambridge: Heffer.
- Bell, A. and C. Collins. 2001. 'ǀHoan and the typology of click accompaniments in Khoisan.' Pp 126-153 in A. Bell and P. Washburn (eds): *Khoisan: Syntax, phonetics, phonology, and contact*. (Cornell Working Papers in Linguistics 18.) Ithaca NY: Cornell University.

- Bell, Arthur and Paul Washburn (eds). 2001. *Khoisan: Syntax, phonetics, phonology, and contact*. (Cornell Working Papers in Linguistics 18. ) Ithaca NY: Cornell University.
- Bendor-Samuel, J. (ed.). 1989. *The Niger-Congo languages*. Lanham, Maryland: University Press of America.
- Bendor-Samuel, J., E. J. Olsen and A. R. White. 1989. 'Dogon.' Ch. 8 (pp169-177) in J. Bendor-Samuel (ed.): *The Niger-Congo languages*. Lanham, Maryland: University Press of America.
- Bleek, D. F. 1927. 'The distribution of Bushman languages in South Africa.' Pp 55-64 in *Festschrift Meinhof*. Hamburg: Augustin.
1928. *The Naron*. Cambridge: Cambridge University Press.
1928. 'Bushman Grammar.' *Zeitschrift für Eingeborenen-Sprachen* 19: 81-98.
1929. *Comparative Vocabularies of Bushman Languages*. Cambridge: Cambridge University Press.
- 1929-30. 'Bushman Grammar (continuation).' *Zeitschrift für Eingeborenen-Sprachen* 20: 161-174.
1931. 'The Hadzapi or Watindenga of Tanganyika Territory.' *Africa* 4 (July).
1937. 'Grammatical notes and texts in the |Auni language.' Pp 194-220 in J.D. Rheinallt Jones and C.M. Doke (eds): *Bushmen of the Southern Kalahari*. Johannesburg: Witwatersrand University Press
1939. 'A short survey of Bushman languages.' *Zeitschrift für Eingeborenen-Sprachen* 30: 52-72.
1956. *A Bushman Dictionary*. New Haven, Connecticut: American Oriental Society.
2000. 'The !D!ke or Bushmen of Griqualand West.' Ed. Tom Güldemann. Cologne: Khoisan Forum Working Paper 15.
- Bleek, W. H. I. 1851. *De nominum generibus linguarum Africa australis, Copticae, Semiticarum aliarumque Sexualium*. Bonn: Adolph Marx.
1857. 'Researches into the relations between the Hottentots and Kaffirs, Parts 1 & 2.' *Cape Monthly Magazine* 1: 199-208; 289-296.
- 2001[1911]. "'The Resurrection of the Ostrich'" part of the preceding tale parsed by Dr Bleek.' Pp 144-154 in *Specimens of Bushman Folklore*.
- Bleek, W. H. I. and L. C. Lloyd. 2001. [1911; (1968)] *Specimens of Bushman Folklore*. Einsiedeln: Daimon Verlag. (1911: London: George Allen & Co., Ltd.; 1968

- Botne, Robert. 1999. 'Future and distal *-ka-'s*' Proto-Bantu or nascent form(s)?'. Pp 473-515 in J-M. Hombert and Larry M. Hyman (eds): *Bantu Historical Linguistics: Theoretical and Empirical Perspectives*. CSLI Publications. Stanford, California: Center for the Study of Language and Information.
2003. 'Lega (Beya dialect) (D25)', pp 422-449 in Nurse and Philippson (2003).
- Brincker, P. H. 1891. *Lehrbuch des Oshikuanjama*. (*Lehrbücher des Seminars für orientalische Sprachen zu Berlin*, 8). Stuttgart: Spemann.
- Brown, J. Tom, 1982. *Setswana Dictionary: Setswana-English and English-Setswana*. Johannesburg: Pula Press.
- Campbell, Lyle. 2004. *Historical Linguistics: An Introduction*. (2<sup>nd</sup> ed.). Edinburgh: Edinburgh University Press.
- Cole, D.T. 1975. *An Introduction to Tswana Grammar*. Cape Town: Longman.
- Collins, Chris. 1998. 'Plurality in #Hoan.' *Khoisan Forum: Working Paper 9*. Cologne: University of Cologne, Institut für Afrikanistik.
- 2001a. 'The internal structure of verbs in Jul'hoan and #Hoan.' Pp1-27 in A. Bell and P. Washburn (eds): *Khoisan: Syntax, phonetics, phonology, and contact*. (Cornell Working Papers in Linguistics 18.) Ithaca, N.Y.: Cornell University.
- 2001b. 'Multiple verb movement in #Hoan.' Pp 75-103 in A. Bell and P. Washburn (eds): *Khoisan: Syntax, phonetics, phonology, and contact*. (Cornell Working Papers in Linguistics 18.) Ithaca, N.Y.: Cornell University.
- Corbett, Greville. 1991. *Gender*. Cambridge: Cambridge University Press.
- Creissels, D. 1999. 'Remarks on the sound correspondences between Proto-Bantu and Tswana (S.31), with particular attention to problems involving \*j (or \*y), \*j and sequences \*NC.' Pp. 297-334 in Jean-Marie Hombert and Larry M. Hyman (eds): *Bantu historical linguistics: theoretical and empirical perspectives*. CSLI Lecture Notes 99. Stanford: Centre for the Study of Language and Information.
- Curriculum Committee for Khoekhoegowab. 2003. *Khoekhoegowab Orthography 3*. Windhoek: Gamsberg MacMillan Publishers.
- Dale, D. 1974. *Shona Companion: A practical guide to Rhodesia's most widely spoken language*. 3<sup>rd</sup> Ed. Gwelo: Mambo Press.

- Dempwolff, O. 1916. *Die Sandawe. Linguistisches und ethnographisches Material aus Deutsch-Ostafrika. (Abhandlungen des Hamburgischen Kolonialinstituts: 34.B. Völkerkunde, Kulturgeschichte und Sprachen: 19.)* Hamburg: L.Friederichsen.
- 1916-17. 'Beiträge zur Kenntnis der Sprachen in deutsch-ostafrika.' 12. Wörter der Hatszasprache.' *Zeitschrift für Kolonialsprachen* 7: 319-325.
- Denning, Keith and Suzanne Kemmer (eds). 1990. *On Language: Selected Writings of Joseph H. Greenberg*. Stanford, California: Stanford University Press.
- Dept. of African Languages and Literature, University of Botswana. 1999. *The Sound System of Setswana*. Gaborone: Lightbooks, Lentswe La Lesedi.
- Dickens, Patrick. 1994. *English-Ju|'hoan, Ju|'hoan-English Dictionary*. (Research in Khoisan Studies 8). Cologne: Rüdiger Köppe.
1996. 'The Place of Lloyd's !Kun Texts in the Ju Dialects.' Pp 161-211 in J. Deacon and T. Dowson (eds.): *Voices from the Past: !Xam Bushmen and the Bleek and Lloyd Collection*. Johannesburg: Wits University Press.
1997. 'Relative clauses in Ju|'hoan.' Pp 107-116 in W. H. G. Haacke and Edward E. Elderkin (eds): *Namibian Languages: Reports and Papers*. Cologne: Rüdiger Köppe Verlag.
2005. *A concise grammar of Ju|'hoan*. (Research in Khoisan Studies 17.) Cologne: Rüdiger Köppe Verlag.
- Dimmendaal, G. J. (ed.). 1986. *Current Approaches to African Linguistics*. Vol 3. Dordrecht: Foris Publications.
- Dixon, R.M.W. 2006. 'Serial verb constructions: conspectus and coda.' Ch. 16 (pp 338-350) in A. Aikhenvald and R.M.W. Dixon (eds): *Serial Verb Constructions: A cross-linguistic typology*. Oxford: Oxford University Press.
- Doke, C. M. 1925. 'An outline of the phonetics of the language of the cHu: Bushmen of North-West Kalahari.' *Bantu Studies* 2 (3): 129 –165.
1937. 'An outline of #Khomani Bushman phonetics.' In J.D. Rheinallt Jones and C. M. Doke (eds.): *Bushmen of the Southern Kalahari*. Johannesburg: Witwatersrand University Press.
1950. *Text-book of Zulu Grammar*. London: Longmans, Green and Co. Ltd.

- Doke, C. M. and S.M. Mofokeng. [1967] 1985. *Textbook of Southern Sotho Grammar*. Cape Town: Maskew Miller Longman.
- Doke, C. M., D. M. Malcolm, J. M. A. Sikakana and B. W. Vilakazi. 1990. *English-Zulu/ Zulu-English Dictionary*. Johannesburg: Witwatersrand University Press.
- Dornan, S.S. 1917. 'The Tati Bushmen (Masarwas) and their language.' *Journal of the Royal Anthropological Institute*, 47 (Jan-June): 37-112.
- Dwyer, David J. 1989. 'Mande.' Ch. 2 (pp 47-65) in J. Bendor-Samuel (ed.): *The Niger-Congo languages*. Lanham, Maryland: University Press of America.
- Eaton, H. 2003. 'Focus as a key to the grammar of Sandawe'. PDF document freely circulated.
- Elderkin, E.D. 1986 'Diachronic influences from basic sentence and noun structure in Central Khoisan and Sandawe.' *Sprache und Geschichte in Afrika* 7(2): 131-156.
- Engelbrecht, J. A. 1936. *The Korana*. Cape Town: Maskew Miller. Previously published (1928) as 'Studies oor Korannataal'. *Annale van die Universiteit van Stellenbosch*. VI (2).
- Ethnologue* 2009. See Lewis, M. Paul (ed.).
- Fauvelle-Aymar, F-X. 2008. 'Against the 'Khoisan paradigm' in the interpretation of Khoekhoe origins and history: a re-evaluation of Khoekhoe pastoral traditions.' *Southern African Humanities* 20: 77-92.
- Festschrift Meinhof*. 1927. Hamburg: Augustin.
- Fisch, Maria. 1998 [1977]; transl. S. Fitchat. *Thimbukushu Grammar*. Windhoek: Out of Africa Publishers.
- Fischer, A., E. Weiss, E. Mdala, S. Tshabe. 2006. *English-Xhosa Dictionary*. Cape Town: Oxford University Press, Southern Africa.
- Fivaz, Derek; with collab. Sakaria Shikomba. 2003. *A reference grammar of Oshindonga*. 2<sup>nd</sup> rev. ed. Windhoek: Out of Africa Publishers.
- Gowlett, D.F. 2003. 'Zone S.' Ch. 30 (pp 609-638) in D. Nurse and G. Philippson (eds): *The Bantu Languages*. London: Routledge.
- Gowlett, D. F. (ed.). 1992. *African Linguistic Contributions: Presented in honour of Ernst Westphal*. Pretoria: Via Afrika Ltd..
- Greenberg, J. H. 1973. *The Languages of Africa*. Bloomington: Indiana University.
- 1990 [1978]. 'How does a language acquire gender markers?' Repr. in K. Denning and S. Kemmer (eds.): *On Language: Selected Writings of Joseph H. Greenberg*.



- Gruber, Jeffrey S. 1974. 'Plural predicates in ꞤHōã.' Pp 1-50 in A. Traill (ed.): *Bushman and Hottentot Linguistic Studies*. Johannesburg: African Studies Institute, University of the Witwatersrand.
- Güldemann, Tom. 1999. 'The genesis of verbal negation in Bantu and its dependency on functional features of clause types.' Pp 545-587 in Jean-Marie Hombert and Larry M. Hyman (eds.): *Bantu historical linguistics: theoretical and empirical perspectives*. CSLI Lecture Notes 99. Stanford: Centre for the Study of Language and Information.
2001. 'Phonological regularities of consonant systems across Khoisan lineages.' University of Leipzig Papers on Africa, No. 16.
- 2002a. 'Die entlehnung pronominaler Elemente des Khoekhoe aus dem !Ui-Taa.' *Aktuelle Forschungen zu afrikanischen Sprachen*: 43-61.
- 2002b. 'Using older Khoisan sources: quantifier expressions in Lower Nosop varieties of Tuu.' *South African Journal of African Languages*. 2002 (3): 187-196.
2003. 'Structural isoglosses between Khoekhoe and Tuu: the Cape as a linguistic area.' Paper presented to the International Symposium on Khoisan Languages and Linguistics in memory of Jan W. Snyman at Riezlern (6/1/2003).
- 2004a. 'Reconstruction through 'deconstruction': the marking of person, gender, and number in the Khoe family and Kwadi.' *Diachronica* 21(2): 251-306.
- 2004b. 'TUU – a new name for the Southern Khoisan family.' Pp 11-30 in T. Güldemann: *Studies in Tuu (Southern Khoisan)* (= University of Leipzig Papers on Africa, Languages and Literatures 23). Leipzig: Institut für Afrikanistik, Universität Leipzig.
- 2004c. 'Tuu as a language family.' Pp 11-30 in T. Güldemann: *Studies in Tuu (Southern Khoisan)* (=University of Leipzig Papers on Africa, Languages and Literatures 23). Leipzig: Institut für Afrikanistik, Universität Leipzig.
- 2004d. 'Complex pronominals in Tuu and Ju, with special reference to their historical significance.' *Afrika und Übersee* 87: 79-103.
- (Forthc.a) 'Greenberg's "case" for Khoisan: the morphological evidence.' In R. Vossen (ed.): *Problems of linguistic-historical reconstruction in Africa* (=Sprache und Geschichte in Afrika 19). Cologne: Rüdiger Köppe.

- Güldemann, T. (ed). 2000. 'The !D!ke or Bushmen of Griqualand West, by Dorothea Bleek.' Cologne: Khoisan Forum Working Paper 15.
- Güldemann, T. and E. D. Elderkin. (Forthc.). 'On external genealogical relationships of the Khoe family.' In M. Brenzinger and C. König (eds.): *Khoisan Languages and Linguistics: the Riezlern symposium 2003*. Cologne: Rüdiger Köppe.
- Güldemann, T. and M. Stoneking. 2008. 'A historical appraisal of clicks: a linguistic and genetic population perspective.' *Annual Review of Anthropology* 37: 93-109.
- Güldemann, T. and R. Vossen. 2000. 'Khoisan.' In B. Heine and D. Nurse (eds): *African Languages: An Introduction*. Cambridge: University Press.
- Haacke, W. H. G. 1977. 'The so-called 'personal pronoun' in Nama.' In A. Traill (ed.): *Khoisan Linguistic Studies* 3. Johannesburg: African Studies Institute, University of the Witwatersrand.
1999. *The Tonology of Khoekhoe (Nama/Damara)*. (*Quellen zur Khoisan-Forschung* 16). Cologne: Rüdiger Köppe.
2006. 'Syntactic focus marking in Khoekhoe ("Nama/Damara").' *ZAS Papers in Linguistics* 46: 105-127.
2008. 'Linguistic hypotheses on the origins of Namibian Khoekhoe speakers.' *Southern African Humanities* 20: 163-177.
- Haacke, W. H. G. and Eliphaz Eiseb. 2002. *A Khoekhoegowab Dictionary*. Windhoek: Gamsberg Macmillan.
- Haacke, W. H. G., Eliphaz Eiseb and Levi Namaseb. 1997. 'Internal and external relations of Khoekhoe dialects: a preliminary survey.' Pp 125-209 in W. H. G. Haacke and Edward E. Elderkin (eds): *Namibian Languages: Reports and Papers*. Cologne: Rüdiger Köppe Verlag.
- Haacke, W. H. G. and Edward E. Elderkin (eds). 1997. *Namibian Languages: Reports and Papers*. Cologne: Rüdiger Köppe Verlag.
- Hagman, R. 1977. *Nama Hottentot Grammar*. Bloomington: Indiana University Publications.
- Halme, Riikka. 2004. *A Tonal Grammar of Kwanyama*. Namibian African Studies 8. Cologne: Rüdiger Köppe.
- Hastings, R. 2001. 'Evidence for the genetic unity of Southern Khoesan.' Pp 225-246 in A. Bell and P. Washburn (eds.): *Khoisan: syntax, phonetics, phonology, and*

- contact*. (Cornell Working Papers in Linguistics 18.) Ithaca, N.Y.: Cornell University.
- Hayward, Richard J. 2000. 'Afroasiatic.' Ch. 4 in B. Heine and D. Nurse (eds): *African languages: An Introduction*. Cambridge: Cambridge University Press.
- Heikkinen, T. 1986. 'Phonology of the !Xū dialect spoken in Ovamboland and western Kavango.' *South African Journal of African Languages* 6 (1): 18-28.
- Heine, Bernd. 1986. 'Bemerkungen zur Entwicklung der Verbaljunktoren im Kxoe und anderen ZentralKhoisan-Sprachen.' Pp 9-21 in R. Vossen and K. Keuthmann (eds): *Contemporary Studies on Khoisan 2. Quellen zur Khoisan-Forschung 5* (2).
1997. 'On gender agreement in Central Khoisan.' Cologne: University of Cologne Institut für Afrikanistik. Khoisan Forum Working Paper No. 4
- Heine, B. and D. Nurse (eds). 2000. *African Languages: An Introduction*. Cambridge: University Press.
- Herbert, Robert K. 2000. 'The sociohistory of clicks in Southern Bantu.' In R. Mesthrie (ed.): *Language in South Africa*. Cambridge: Cambridge University Press.
- Herbert, Robert K. (ed.). 1997. *African Linguistics at the Crossroads: Papers from Kwaluseni: 1<sup>st</sup> World Congress of African Linguistics. Swaziland 1994*. Cologne: Rüdiger Köppe.
- Hombert, Jean-Marie and Larry M. Hyman (eds.). 1999. *Bantu historical linguistics: theoretical and empirical perspectives*. CSLI Lecture Notes 99. Stanford: Centre for the Study of Language and Information.
- Honken, H. 1977. 'Submerged features and Proto-Khoisan.' In A. Traill (ed): *Khoisan Linguistic Studies* 3. Johannesburg: African Studies Institute, University of the Witwatersrand.
1988. 'Phonetic correspondences among Khoisan affricates.' Pp 47-65 in R. Vossen (ed): *New Perspectives on the Study of Khoisan. (Quellen zur Khoisan-Forschung 7.)* Hamburg: Helmut Buske.
1998. 'Types of sound correspondence patterns in Khoisan languages.' Pp 171-ppp in M. Schladt (ed): *Language, Identity, and Conceptualisation among the Khoisan. (Quellen zur Khoisan-Forschung 15.)* Cologne: Rüdiger Köppe.
- Horton, A. E. 1949. *A Grammar of Luvale*. Johannesburg: Witwatersrand University Press.

- Huffman, Thomas N. 2006. 'Bantu migrations in southern Africa'. Chapter 7 (pp 97-108) in Himla Soodyall (ed): *The Prehistory of Africa: Tracing the lineage of modern man*. Johannesburg & Cape Town: Jonathan Ball Publishers.
- Johnston, H. 1919. *A Comparative Study of the Bantu and Semi-Bantu Languages*. 2 vols. Oxford: Clarendon Press.
- Jones, Charles (ed.). 1993. *Historical linguistics: Problems and perspectives*. London: Longman.
- Jones, J. D. Rheinallt and C. M. Doke (eds). 1937. *Bushmen of the Southern Kalahari*. Johannesburg: Witwatersrand University Press.
- Kiessling, R. 2002. 'Verbal plurality in Sandawe'. PDF file. [www.language-archives.org/item/oi:refdb.wals.info:3337](http://www.language-archives.org/item/oi:refdb.wals.info:3337)
- Kilian-Hatz, Ch. 1997. 'On nominal gender marking in Kxoe.' Cologne: University of Cologne Institut für Afrikanistik. Khoisan Forum Working Paper No. X
1999. *Folktales of the Kxoe in the West Caprivi*. (Namibian African Studies Vol. 5). Cologne: Rüdiger Köppe Verlag.
2003. *Khwe Dictionary*. Cologne: Rüdiger Köppe.
2006. 'Serial verb constructions in Khwe (Central-Khoisan).' Ch. 4 (pp 108-123) in A. Aikhenvald and R.M.W. Dixon (eds): *Serial Verb Constructions: A cross-linguistic typology*. Oxford: Oxford University Press.
- Kilian-Hatz, Ch. and Bernd Heine, 1998. 'On nominal gender marking in Kxoe.' Pp 65-93 in M. Schladt (ed): *Language, Identity, and Conceptualization among the Khoisan*. (Quellen zur Khoisan-Forschung 15). Cologne: Rüdiger Köppe Verlag.
- Kloppers, J. K. 1994. *Bukengango Rukwangali-English: English-Rukwangali Dictionary*. (Compiled Kloppers, expanded D. Nakare and L. M. Isala, edited A.W. Bredell). Windhoek: Gamsberg Macmillan.
- Ladefoged, P. 1982. *A Course in Phonetics* [2<sup>nd</sup> ed]. New York: Harcourt Brace Jovanovich, Inc.
- Lanham, L. W. and D. P. Hallowes 1956a. 'An outline of the structure of Eastern Bushman.' *African Studies* 15 (3) : 98-118.
- 1956b. 'Linguistic relationships and contacts expressed in the vocabulary of Eastern Bushman.' *African Studies* 15(1): 45-48. Repr. (pp 253-256) in R. K. Herbert (ed.): *Foundations in Southern African Linguistics*. Johannesburg: Witwatersrand University Press.

- Lass, R. 1993. 'How real(ist) are reconstructions?' Pp 156-189 in C. Jones (ed.): *Historical linguistics: Problems and perspectives*. London: Longman.
1997. *Historical linguistics and language change*. (Cambridge Studies in Linguistics 81.) Cambridge: Cambridge University Press.
- Legère, Karsten, 1998. 'Khoisan traces in Kavango languages.' Pp 193- 215 in M. Schladt (ed): *Language, Identity, and Conceptualization among the Khoisan*. (*Quellen zur Khoisan-Forschung* 15). Cologne: Rüdiger Köppe Verlag.
- Le Roux, J.C. 2003. *Die Kort Drietalige Sakwoordeboek: Afrikaans Tswana English*. Johannesburg: Ad Donker.
- Lewis, M. B. 1947. *Teach yourself Malay*. London: The English Universities Press, Ltd.
- Lewis, M. Paul (ed.). 2009. *Ethnologue: Languages of the World*. (Sixteenth edition.) Dallas, Texas: SIL International. Online version: <http://www.ethnologue.com/>.
- Lisimba, Mukumbuta. 1985. *A Luyana Dialectology*. Thesis submitted (1982) in partial fulfilment of the requirements for the degree of Doctor of Philosophy (African Languages and Literature), University of Wisconsin-Madison.
- Lloyd, L.C. and L. Maingard, 1932. 'Korana names of animals and plants'. *Bantu Studies* 6(4): 309-321.
- Loprieno, Antonio. 1995. *Ancient Egyptian: A linguistic introduction*. Cambridge: Cambridge University Press.
- Louw, C. S. 1915. *A Manual of the Chikaranga Language*. Bulawayo: Philpott and Collins.
- Louw, J. A. 1977. 'The adaptation of non-click consonants in Xhosa.' In A. Traill (ed): *Khoisan Linguistic Studies* 3. Johannesburg: African Studies Institute, University of the Witwatersrand.
- Mabille, A. and H. Dieterlen, reclassified, revised and enlarged R. A. Paroz. 1988. *Southern-Sotho-English Dictionary (South African orthography)*. Morija: Morija Sesuto Book Depot.
- Maingard, L. F. 1937. 'The #khomani dialect of Bushman: its morphology and other characteristics.' In J. D. Rheinallt Jones and C. M. Doke (eds.): *Bushmen of the Southern Kalahari*. Johannesburg: Witwatersrand University Press.

1962. *Koranna Folktales: Grammar and texts*. Johannesburg: Witwatersrand University Press.
- Mallory, J.P. and D.Q. Adams. 2006. *The Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World*. Oxford: Oxford University Press.
- McLaren, J. (revised W. G. Bennie and J.J. R. Jolobe). 1963. *A New Concise Xhosa-English Dictionary*. Cape Town: Longmans.
- Marconnès, F. 1931. *A Grammar of Central Karanga*. (= *Bantu Studies*, Suppl. No 5). Johannesburg: Witwatersrand University Press.
- Mchombo, Sam. 2004. *The Syntax of Chichewa*. Cambridge: Cambridge University Press.
- Meeussen, Achille F. 1967. 'Bantu grammatical reconstructions.' *Africana Linguistica* 3: 79-121.
- Meinhof, C. 1905. 'Hottentottische Laute und Lehnworte im Kafir.' Leipzig: Brockhaus. [Reprint from *Zeitschrift der Deutschen Morgenländische Gesellschaft*.]
1912. *Die Sprachen der Hamiten*. With a supplement, 'Hamitic types', by Felix von Luschan. Hamburg: L. Friederichsen and Co.
- 1928-1929. 'Versuch einer grammatischen Skizze einer Buschmannsprache.' *Zeitschrift für Eingeborenen-Sprachen* 19: 161-88.
1930. *Der Koranadialekt des Hottentottischen*. (*Zeitschrift für Eingeborenen-Sprachen*, Beiheft 12.) Berlin: Dietrich Reimer; Hamburg: C. Boysen.
- Mesthrie, Rajend (ed). 2002. *Language in South Africa*. Cambridge: Cambridge University Press.
- Meinhof, C. with H. Hegner, D. Westermann and C. Wandres, 1909. *Lehrbuch der Nama-sprache*. Berlin: Georg Reimer.
- Miller, A., J. Brugman, B. Sands, L. Namaseb, M. Exter and C. Collins. 2009. 'Differences in airstream and posterior place of articulation among N|uu clicks.' *Journal of the International Phonetic Association* 39: 129-161.
- Miller, A., L. Namaseb and K. Iskarous. 2007. 'Tongue body constriction differences in click types'. Pp. 643-656 in Jennifer S. Cole and José Ignacio Hualde (eds): *Proceedings of Laboratory Phonology 9*. Berlin: Mouton de Gruyter.

- Miller-Ockhuizen, A. 2001. 'Contrastive vowel-length and variable weight reduplicative templates in Ju|'hoansi.' Pp 104-125 in A. Bell and P. Washburn (eds): *Khoisan: Syntax, phonetics, phonology, and contact*. (Cornell Working Papers in Linguistics 18.) Ithaca NY: Cornell University.
- Miller-Ockhuizen, A. and B.E. Sands. 2000. 'Contrastive lateral clicks and variation in click types'. Pp 499-500 in *Proceedings of ICSLP 2000*, Vol II. Beijing.
- Möhlig, Wilhelm J.G. 1967. *Die Sprache der Dciriku: Phonologie, Prosodologie und Morphologie*. Inaugural-Dissertation. Universität zu Köln.
2005. *A grammatical sketch of Rugciriku (Rumanyo)*. Cologne: Rüdiger Köppe Verlag.
- Mous, Maarten. c. 1993. *A Grammar of Iraqw*. Doctoral Thesis. University of Leiden.
2003. *The Making of a Mixed Language. The case of Ma'a/Mbugu*. Amsterdam: J. Benjamins.
- Nakagawa, H. 1998. 'Unnatural palatalization in |Gui and ||Gana?' In M. Schladt (ed): *Language, Identity, and Conceptualization among the Khoisan*. (*Quellen zur Khoisan-Forschung* 15). Cologne: Rüdiger Köppe.
- Nichols, Johanna. 1992. *Linguistic diversity in space and time*. Chicago: Chicago University Press.
1996. 'The comparative method as heuristic.' Pp 39-71 in Mark Durie and Malcolm Ross (eds): *The comparative method reviewed: regularity and irregularity in language change*. Oxford: Oxford University Press.
- Nurse, D. and H. Muzale. 1999. 'Tense and aspect in Lacustrine Bantu languages.' Pp.517-544 in Jean-Marie Hombert and Larry M. Hyman (eds.): *Bantu historical linguistics: theoretical and empirical perspectives*. CSLI Lecture Notes 99. Stanford: Centre for the Study of Language and Information.
- Nurse, D. and G. Philippson. 2003. 'Towards a historical classification of the Bantu languages.' Ch. 10 (pp 164-181) in D. Nurse and G. Philippson (eds): *The Bantu Languages*. London: Routledge.
- Nurse, D. and G. Philippson (eds). 2003. *The Bantu Languages*. London: Routledge.
- Nyembezi, S. 1970. *Learn More Zulu*. Pietermaritzburg: Shuter and Shooter.
- O'Neil, J. 1935. *A Shona Grammar*. London: Longmans, Green and Co.
- Paul, Lewis, M. (ed.). 2009. *Ethnologue: Languages of the World*, Sixteenth edition. Dallas, Tex.: SIL International. Online version: <http://www.ethnologue.com/>.

- Plumley, J. Martin. *An Introductory Coptic Grammar (Sahidic Dialect)*. London: Home and Van Thal. Manuscript version and transcript by George F. Somsel available online at [www.metalog.org/files/plumley.html](http://www.metalog.org/files/plumley.html).
- Poulos, George. 1990. *A Linguistic Analysis of Venda*. Pretoria: Via Afrika Ltd.
- Robertson, J. 2000. 'A new paradigm: the African Early Iron Age without Bantu Migrations.' *History in Africa* 21: 287-323.
- Rust, F. 1965. *Praktische Namagrammatik (Auf Grund der Namagrammatiken von H. Vedder und J. Olpp)*. Cape Town: A. A. Balkema.
- Rycroft, D.K. 2008. *Concise SiSwati Dictionary*. Pretoria: J.L. Van Schaik.
- Sadr, Karim. 2003. 'The neolithic of southern Africa.' *The Journal of African History* 44(2): 195-209.
- Sands, B. 1998. *Eastern and Southern African Khoisan: Evaluating claims of distant linguistic relationships. (Quellen zur Khoisan-Forschung 14)*. Cologne: Rüdiger Köppe.
2001. 'Borrowing and diffusion as a source of lexical similarities in Khoesan.' Pp 200-224 in A. Bell and P. Washburn (eds.): *Khoisan: syntax, phonetics, phonology, and contact. (Cornell Working Papers in Linguistics 18)*. Ithaca, N.Y.: Cornell University.
- Sands, B., I. Maddieson and Peter Ladefoged. 1996. 'The phonetic structures of Hadza.' *Studies in African Linguistics* 25(2): 171-204.
- Sands, B., A. L. Miller and J. Brugman. (2007) 'The lexicon in language attrition: the case of N|uu.' Pp. 55-65 in Doris L. Payne & Jaime Peña (eds): *Selected Proceedings of the 37th Annual Conference on African Linguistics*. Somerville, MA: Cascadilla Proceedings Project. Available online: <http://www.lingref.com/cpp/acal/37/index.html>
- Schadeberg, Thilo C. 1987. 'Nasalization in Umbundu'. *Journal of African Languages and Linguistics* 4: 109-132.
2003. 'Historical linguistics.' Ch. 9 (pp 143-163) in D. Nurse and G. Philippson (eds): *The Bantu Languages*. London: Routledge.
- Schapera, I. 1930. *The Khoisan Peoples of South Africa*. London: George Routledge and Sons.



- Schultze, L. 1928. *Zur Kenntnis des Körpers der Hottentotten und Buschmänner*. Jena: G. Fischer.
- Sebba, M. 1995. 'Some remarks on Ju|'hoan serial verbs.' In A. Traill, R. Vossen and M. Biesele (eds): *The Complete Linguist: Papers in memory of Patrick J. Dickens*. Cologne: Rüdiger Köppe.
- Sebeok, T. A. (ed.) 1971. *Linguistics in Sub-Saharan Africa*. Current Trends in Linguistics, 7. The Hague and Paris: Mouton.
- Snyman, J. W. 1970. *An introduction to the !Xū (!Kung) language*. (Communication 34 of the University of Cape Town School of African Studies.) Cape Town: A. A. Balkema.
- c.1975. *Zu|'hoasi Fonologie en Woordeboek*. Cape Town: A. A. Balkema.
1977. 'The interrupted juxtaposed vowels of Žu|'hōasi'. Pp 93-101 in A. Traill (ed.): *Khoisan Linguistic Studies 3*. Johannesburg: African Studies Institute, University of the Witwatersrand.
- 1980 'The relationship between Angolan !Xū and Žu|'hōasi.' Pp 1-58 in J. W. Snyman (ed.) (1980): *Bushman and Hottentot Linguistic Studies*. Pretoria: Unisa.
1997. 'A preliminary classification of the !Xū and Žu|'hōasi dialects.' Pp 21-106 in W. H. G. Haacke and Edward E. Elderkin (eds). 1997. *Namibian Languages: Reports and Papers*. Cologne: Rüdiger Köppe Verlag.
- Snyman, J. W. (ed.). 1980. *Bushman and Hottentot Linguistic Studies*. Pretoria: Unisa.
- Solnit, D.B. 2006. 'Verb Serialization in Eastern Kayah Li.' In A. Aikhenvald and R.M.W. Dixon (eds): *Serial Verb Constructions: A cross-linguistic typology*. Oxford: Oxford University Press.
- Soodyall, H. (ed). 2006. *The Prehistory of Africa: Tracing the lineage of modern man*. Johannesburg & Cape Town: Jonathan Ball Publishers.
- Stewart 1999
- Story, Robert. 1999 [1937]. 'K'u|ha:si Manuscript'. Ed Anthony Traill. Cologne: Khoisan Forum Working Paper 13.

- Ten Raa, E. 1986. 'The Alagwa: A northern intrusion in a Tanzanian Khoi-San culture, as testified through Sandawe oral tradition.' Pp 271-299 in R. Vossen and K. Keuthmann (eds): *Quellen Zur Khoisan-Forschung* 5(2).
- Tessmann, G. 1931. 'Die drei Sprachen des Bajastammes: To, Labi, Baja (Kamerun).' *Mitteilungen des Seminars für Orientalische Sprachen*, Berlin. 34 (3): 70-115.
1937. *Die Baja: ein Negerstamm in mittlere Sudan*. Stuttgart: Strecker und Schröder.
- Tobias, G. W. R. and B. H. C. Turvey. 1954. *English-Kwanyama Dictionary*. Johannesburg:
- Traill, A. 1973. "'N4 or S7?": Another Bushman language.' *African Studies* 32(1): 25-32.
- 1974a. 'Westphal on "N4 or S7?": A reply.' *African Studies* 33(4): 249-255.
- 1974b. 'Phonetic correspondences in the !Xõ dialects: how a Bushman language changes.' Pp 77-102 in A. Traill (ed.): *Bushman and Hottentot Linguistic Studies*. Johannesburg: African Studies Institute, University of the Witwatersrand.
1985. *Phonetic and Phonological Studies of !XOO Bushman*. (*Quellen zur Khoisan-Forschung* 1). Hamburg: Helmut Buske Verlag.
- 1986a. 'Click replacement in Khoe.' Pp 301-320 in R. Vossen and K. Keuthmann (eds): *Quellen zur Khoisan-Forschung* 5(2).
- 1986b. 'Do the Khoi have a place in the San? New data on Khoisan linguistic relationships.' *Sprache und Geschichte in Afrika* 7 (1): 407 – 430.
1994. *A !Xõ Dictionary*. (*Quellen zur Khoisan-Forschung* 9). Cologne: Rüdiger Köppe.
1995. 'Interpreting !Xam phonology: the need for typological cleansing.' In A. Traill, R. Vossen and M. Biesele (eds): *The Complete Linguist. Papers in memory of Patrick J. Dickens*. Cologne: Rüdiger Köppe.
- Traill, A. (ed.). 1974. *Bushman and Hottentot Linguistic Studies*. Johannesburg: African Studies Institute, University of the Witwatersrand.
- Traill, A. (ed.). 1977. *Khoisan Linguistic Studies 3*. Johannesburg: African Studies Institute, University of the Witwatersrand.
- Traill, A. (ed.) 1999. 'K'u|ha:si Manuscript by Robert Story.' *Khoisan Forum Working Paper* 13. Cologne: University of Cologne.

- Traill, A., J.S.M. Khumalo and P. Fridhon. 1987. 'Depressing facts about Zulu'. *Journal of African Studies* 46: 255-74.
- Traill, A. and H. Nakagawa. 2000. 'A historical !Xóǀ-|Gui contact zone.' In H. Batibo and J. Tsonope (eds): *The State of Khoesan Languages in Botswana*. Mogoditshane, Botswana: Tasalls Publishing and Books.
- Traill, A. and R. Vossen. 1997. 'Sound changes in the Khoisan languages: new data on click loss and click replacement.' *Journal of African Languages and Linguistics* 18 (1): 21-56.
- Traill, A., R. Vossen and M. Biesele (eds.) 1995. *The Complete Linguist: Papers in memory of Patrick J. Dickens*. Cologne: Rüdiger Köppe.
- Tucker, A.N. 1929. *The Comparative Phonetics of the Suto-Chuana Group of Bantu Languages*. London: Longmans, Green and Co.
1940. *The Eastern Sudanic Languages*. Vol. I. Published for the International African Institute. London: Oxford University Press.
- Tucker, A. N. and M. A. Bryan (eds.) 1966. *Linguistic Analyses: The Non-Bantu Languages of North-Eastern Africa*. (With a supplement on The Ethiopic Languages, by Wolf Leslau.) Published for the International African Institute. London: Oxford University Press.
- Van der Kemp, J. T. and J. Kicherer. 1805. *Gedenkschriften Van Het Nederlandsch Zendeling-geenootschap*. Rotterdam: Cornel en Van Balen.
- Van der Westhuizen, P. J. W. S. 1972. *Tydsaanduiding in die Gobabis-!Xū*. Thesis presented in fulfilment of the requirements for the MA degree at the University of Cape Town.
- Van Warmelo, N. J. 1989. *Venda Dictionary: Tshivenda-English*. Pretoria: J.L. van Schaik.
- Vedder, H. 1910-1911. 'Grundriss einer Grammatik der Buschmann-Sprache von Stamm der !ku-Buschmanner.' *Zeitschrift für Kolonialsprachen* 1: 5-24; 106-17.
- Viljoen, J.J., P. Amakali and N. Namuandi. 2004. *Oshindonga/English: English/Oshindonga Dictionary*. Windhoek: Gamsberg Macmillan.
- Visser, H. 2001. *Naro Dictionary: Naro-English; English-Naro*. Gantsi: Naro Language Project.
- Voeltz, F. K. Erhard (ed.). 1974: *3<sup>rd</sup> Annual Conference on African Linguistics*. Bloomington: Indiana University Publications.

- Vossen, R. 1988. 'Khoe linguistic relationships reconsidered: the data.' Pp 67-108 in R. Vossen (ed): *New Perspectives on the Study of Khoisan (Quellen zur Khoisan-Forschung 7)*: 67-108.
1992. 'q in Khoe: borrowing, substrate or innovation?' Pp 363-388 in D. Gowlett (ed.): *African Linguistic Contributions: Presented in honour of Ernst Westphal*. Pretoria: Via Afrika Ltd..
1997. *Die Khoe-Sprachen: Ein Beitrag zur Erforschung der Sprachgeschichte Afrikas. (Research in Khoisan Studies 12.)* Cologne: Rüdiger Köppe.
- Vossen R. (ed.). 1988. *New Perspectives on the Study of Khoisan. (Research in Khoisan Studies 7.)* Hamburg: Buske.
- Watkins, C. 2000. *The American Heritage Dictionary of Indo-European Roots*. Boston: Houghton Mifflin Co.
- Westphal, E. O. J. 1958. 'Kwangari: An index of lexical types.' School of Oriental and African Studies, University of London.
1963. 'The linguistic prehistory of southern Africa: Bush, Kwadi, Hottentot and Bantu linguistic relationships.' *Africa* 33: 237-65.
1971. 'The click languages of southern and eastern Africa.' In T. A. Sebeok (ed.): *Linguistics in Sub-Saharan Africa. (Current Trends in Linguistics 7)*. The Hague and Paris: Mouton.
1974. 'Notes on A Traill: "N4 or S7?"' *African Studies* 33(4): 243-247.
- [n.d] Unpublished papers housed in the University of Cape Town Library's Department of Manuscripts and Archives. (BC 1143 EOJ Westphal papers. C4: Kwadi language.)
- Wuras, C.F. 1919-1920 [?c.1850] (Edited W. Bourquin.) 'An outline of the Bushman language'. *Zeitschrift für Eingeborenen-Sprachen* X: 81-87.
- Wynne, R. C. 1980. *English-Mbukushu dictionary*. Avebury Publishing Company Limited, England.
- Zambesi Mission. [n.d.]. *English-Cinyanja Dictionary*. London and Redhill: United Society for Christian Literature.
- Ziervogel, D. 1955. 'Notes on the language of the Eastern Transvaal Bushmen.' In E.F. Potgieter: *The Disappearing Bushmen of Lake Chrissie*. Pretoria: Van Schaik Ltd.