On external genealogical relationships of the Khoe family

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1. Introduction

The genealogical affiliation of the non-Bantu and non-Cushitic click languages of Africa is still under debate, in particular whether they all form a coherent linguistic lineage referred to as "Khoisan". The Khoe family (formerly Central Khoisan) plays an important role in this respect, for several reasons. In general, it has a special place in the history of African linguistic classification, because its Khoekhoe branch, formerly known as "Hottentot", was intricately associated with Meinhof's "Hamitic theory" and was decisive in showing its ultimate untenability.[1] Khoe is important within Khoisan, too, because it is the largest linguistic unit of a clearly genealogical nature (see Voßen's (1997) thorough historical-comparative study) and comprises the majority of attested

languages subsumed under Khoisan. One consequence of this is that attempts towards Khoisan-internal classification beyond the level of obvious families have to focus on the properties of Proto-Khoe, which may reach back in time ca. 2000 years.

The considerable subbranching of Khoe and its approximate number of member languages/ dialect clusters is shown in Figure 1 (after Güldemann and Vossen 2000: 102).

Branches   **Dialect groups** († extinct)

1 Khoekhoe
   a North: Eini†/ Nama-Damara, Hai‖'om
   b South: !Ora†/ Cape†
2 Kalahari
   a East: Shua, Ts'ixa, Danisi, |Xaise, Deti†/ Kua-Tsua
   b West: Kxoe, Buga, ‖Ani/ G‖ana, G|ui, ǂHaba/ Naro

Figure 1: Internal classification of Khoe

Independently of the notorious problem of whether there is a genealogical unit Khoisan in the sense of Greenberg (1963), an important question arises with respect to the Khoe family: Are there other African languages or language groups which can be shown by commonly accepted classification methods to be genealogically related to it?

We will argue in this paper that there is indeed evidence to answer this question positively. First, we will present additional lexical data for the hypothesis put forward by Güldemann (forthcoming a) on account of grammatical evidence that Kwadi

and the Khoe family form a genealogical higher-order group called for convenience Khoe-Kwadi (Section 2). Second, we will assemble grammatical and lexical data suggesting another promising hypothesis, namely that Sandawe, spoken far away in East Africa, stands a good chance to be related to Khoe-Kwadi in southern Africa (Section 3). The paper closes with a brief summary of the proposed hypotheses, including their implications for future work on Khoisan classification and history (Section 4).

The sources of the material used in this study are as follows. The bulk of the Khoe data come from Voßen's (1997) historical-comparative study containing reconstructions of several hundred lexical items and a considerable number of grammatical forms for the proto-languages of the entire family and its major sub-groups.[2] Reference to other data from individual Khoe languages will only be made when necessary. This procedure is clearly preferable when one is to decide whether the common ancestor of modern Khoe languages has surviving linguistic relatives.

Although all Kwadi data presented here go back to Westphal's material hosted in the African Studies Archive (University of Cape Town), they are of different kinds. While for the grammatical commonalities between Khoe and Kwadi the reader is referred to the secondary analysis of Westphal's notes by Güldemann (forthcoming a), the lexical data are cited directly from his material. These are classified into five sets and are referred to

separately below. They are his own Kwadi field notes as the main source, his comparative Khoisan vocabulary published in Westphal (1965), a short draft introduction on Kwadi which he seems to have written for A. de Almeida based on the material collected by this Portuguese anthropologist in the 1950s, a short Kwadi vocabulary apparently written on the same basis and for the same purpose, and, finally, a comparative vocabulary of Angolan Khoisan languages collected during his own field work.

Sandawe data are taken from Elderkin (1989, 1994, field notes).

The sources are summarized in Table 1, including some abbreviations used in the lexical tables.

Language (group)	Source	Abbreviations for sub groups or before page reference	
Khoe	Voßen	1997	
		*Khoekhoe	Kk
		*Kalahari	Ka
		*West Kalahari	WKa
		*East Kalahari	EKa
Namibian Kk	Haacke/Eiseb	2002	NKk
Naro	Visser	2001	N
Kwadi	Güldemann	forthcoming a	
	Westphal	field notes[3]	
	Westphal	1965	W1
	Westphal	Almeida manuscript	W2
	Westphal	Almeida vocabulary	W3
	Westphal	Angola vocabularies	W4
Sandawe	Elderkin	1989, 1994, field notes	
Southern Cushit.	Kießl./Mous	2003	

Table 1:   Data sources for Khoe, Kwadi, and Sandawe

2. The relationship between Khoe and Kwadi

As indicated above, the first hypothesis to be explored regarding an external relationship of the Khoe family concerns Kwadi. Westphal, the only linguist having first hand experience with this language, either considered it to be a linguistic isolate (1962: 8, 1963: 247) or contemplated the possibility that it is remotely related genealogically to the Khoe family (1965: 137, 1971: 380). Other scholars like Köhler (1981: 469) were more supportive of the second hypothesis. In any case, no substantial empirical support was put forward for either of the two proposals.

Westphal rightly observed considerable grammatical differences between Kwadi and Khoe and a genealogical relation between the two is certainly not obvious. At the same time, Westphal has in general been extremely reluctant to consider any possibility of genealogical relationships within subgroups of Greenberg's (1963) Macro-Khoisan. This also applies to the status of Kwadi, which was not known to Greenberg.

2.1. The reconstructed pronoun system of Proto-Khoe-Kwadi

A deeper analysis of the pronominal and nominal morphology of the two units reveals quite a number of commonalities, some of which are even apparent in a superficial comparison. Güldemann (forthcoming a) assembles these affinities in a systematic way and the reader is referred to this paper for a more extensive discussion.

Here, we confine ourselves to just listing the elements supposedly shared by the Khoe family and Kwadi in the domain of person-gender-number marking. Compare their reconstructions in Table 2.

	Meaning or function	Form or feature
1	1st-pers. sing. pronoun	*ti and *ta as allomorphs
2	2nd-pers. sing. pronoun	*sa
3	1st-pers. dual pronoun	*mu
4	2nd-pers. non-sing. pronoun	*o or *u
5	3rd-person fem. sing. marker	final front vowel or *-sV[front]
6	3rd-pers. masc. sing. marker	final front vowel
7	3rd-pers. fem. pl. marker	final front vowel
8	3rd-pers. masc. pl. marker	final vowel u
9	3rd-pers. pronoun base	*xa
10	noun 'person' as pronoun base	*kho
11	nominal dual suffix	*-da

Table 2: **The markers of person, gender, and number reconstructed for Proto-Khoe-Kwadi**

These markers can be integrated in a reconstructed pronoun system which is given in Table 3. This system is of the so-called "minimal-augmented" type, which is characterized first of all by a simplex inclusive dual pronoun combining two usually separate person features, namely 1st person (or speaker) and 2nd person (or hearer). This is associated with a distinct conceptual organization of the system as a whole in that this pronoun represents a fourth person category in the singular, on a par with the features 1st, 2nd, and 3rd person, namely a simplex 1st+2nd person.

	- Augmented or Minimal (= Singular)	+ Augmented (= Plural)
+Speaker/+Hearer (= 1st+2nd inclusive)	*mu	?
+Speaker/-Hearer (= 1st exclusive)	*ti, *ta	?
-Speaker/+Hearer (= 2nd)	*sa	*o or *u
-Speaker/-Hearer (= 3rd) masculine	$stem^1 + (?)\text{-}*V^{[front]2}$	$stem^1 + (?)\text{-}*u^2$
-Speaker/-Hearer (= 3rd) feminine	$stem^1 + *(s)V^{[front]2}$	$stem^1 + (?)\text{-}*V^{[front]2}$

Notes: ?   no plausible reflex in both Khoe and Kwadi
1   deictic like *xa or generic noun like *kho
2   also used as gender-number index on nouns

Table 3:   The reconstructed pronoun system of Proto-Khoe-Kwadi

Other possible explanations for the similarities between the Khoe family and Kwadi, such as coincidence, universal trends, and language contact, have few concrete facts in their favor, so that, on account of the above evidence alone, Güldemann (forthcoming a) argues for a genealogical relationship, to the effect that the two are sister branches deriving from the assumed common ancestor language Proto-Khoe-Kwadi. A search for other grammatical commonalities between the two is, however, worthwhile undertaking.[4]

2.2. Lexical comparison

In view of these grammatical affinities, it should be expected that the two also share lexical items inherited from their supposed common ancestor. Westphal, the only scholar with access to the data that are necessary for carrying out such a comparison, stated on this issue:

> ... although it [Kwadi] contains some 5-10 words comparable to Kora (i.e. !ora) but not Nama, it cannot as yet be classed with the Hottentot [= Khoe] languages. There are no sound-shifts which link Kwadi and any Hottentot language, the vocabulary is limited to the 5-10 similar (probably not common) words, and the grammar is very different. (1965: 137)

> Their [Kwadi] country was invaded by the Nama in 1860 and hunting parties are known to have made their appearance there, perhaps from before that time, and certainly later. These visits may account for some of the Khoe vocabulary [in the Kwadi lexicon]. (1980: 61)

We will try to show in the following that his statements are misleading in several respects. For one thing, his remark on "5-10 similar (probably not common) words" is an understatement even detectable from his own comparative word lists for 61 lexical items across Southern African Khoisan (Westphal 1965: 139-44). A closer look at these data reveals that there are 13 fairly good Khoe-Kwadi correspondences involving 14 lexical items (see the series for 'man', 'head', 'nose', 'heart', 'tongue', 'throat', 'breast' ~ 'milk' (two meanings of one lexeme), 'meat', 'cow', 'sheep',

'skin', 'night', and 'year') and ten additional candidate items (see the series for 'person', 'boy', 'woman' ~ 'girl', 'father' ~ 'mother', 'eye', 'dog', 'zebra', and 'tree'). These 14 or, in the high count, 24 potential cognates (to be presented below with other relevant data) represent 23% or 39% of Westphal's vocabulary total. Whatever the status of these admittedly superficial comparisons, the potentially relevant items are far more numerous than he states. Moreover, the comparable vocabulary often displays more than just "similarity" and some regular correspondences are discernible (see below). This makes it clear that the lexical similarities between Kwadi and the Khoe family are not random, but definitely warrant a more concrete HISTORICAL explanation.

A second point is that the historical interpretation he himself invokes, namely that Nama incursions into southern Angola in the late 19th century could be held responsible for Kwadi's lexical affinities, is not supported by the available historical data. That is, there is no clear evidence for intimate language contact between Kwadi and Nama (see the information given in Güldemann (forthcoming a)). Westphal's entire argumentation also lacks logical consistency, because his claim that the similarities exist with "Kora (i.e. !ora) but not Nama" contradicts this very hypothesis, i.e. Kwadi's lexical borrowing from Nama.

This leads to a final point: pace Westphal's unsubstantiated claim, the words which Kwadi has in common with the Khoe

family are in fact not restricted in the latter to !Ora. Using Voßen's (1997) lexical reconstructions for different proto-stages in the family, we will show that plausible comparisons concern the language group as a whole involving both its branches, Khoekhoe (including !Ora AND Nama) and Kalahari.

In general, a vocabulary search that is more dedicated to the idea that Kwadi might not be a linguistic isolate suggests that a genealogical relation to Khoe is very probable, supporting the grammatical evidence provided by Güldemann (forthcoming a).

The lexical items compared between Khoe and Kwadi will be grouped according to types of possible sound changes. Hence, a comparison can be given more than once if relevant for more than one type of potential sound correspondence; therefore a lexical pair can involve a considerable formal divergence (e.g., Khoe *‖'om 'sleep' is compared to Kwadi *'mu,* because there is evidence for both lateral click loss in Kwadi and vowel changes involving non-initial m). Tone marks, although relevant in the languages involved, are omitted, because the available information is inconsistent and therefore not informative at this stage. All comparisons where the English word in the leftmost column is followed by a question mark are considered to be weak. If relevant, we will give alternative forms attested in the available data; an alternative transcription of a Kwadi word (often turning up in a different source) appears in parentheses. Our comments, interpretations, etc.

are given in square brackets. Kwadi items ending in a hyphen are mostly nouns which are followed by a gender-number suffix.

For a better understanding of the comparisons, we present the consonant systems of the compared units, i.e. Proto-Khoe (Table 4, after Voßen 1997: 319, 326) and Kwadi (Table 5, after Güldemann (forthcoming c)).[5]

	EG Lb	EG Al	EG Pl	IG Lt	IG Dt	IG Al	IG Pl	EG Vl	EG Gl
Non-nasal sonorants									
Plain		?*r							
Fricatives									
Plain		*s						*x	*h
Simple stops									
Plain	*p	*t	*ts	*‖	*ǀ	*!	*ǂ	*k	*’
Voiced	*b	*d		*g‖	*gǀ	*g!		*g	
Complex stops									
Plain + As		*th		*‖h	*ǀh	*!h		*kh	
Plain + Gl			*ts’	*‖’	*ǀ’	*!’	*ǂ’	*kx’	
Stop clusters									
Plain + /x/				*‖x	*ǀx	*!x	*ǂx		
Plain + /kx’/				*‖x’	*ǀx’	*!x’	*ǂx’		
Nasals									
Plain	*m	*n		*n̥ǀ	*n̥!	*n̥‖	*n̥ǂ		
Voiced						*n!	*nǂ		

Table 4:   The reconstructed consonant system of Khoe

	EG Lb	EG Al	EG Pl	EG Lt	IG Lt	IG Dt	IG Pl	EG Vl	EG Gl
Non-nasal sonorants									
Plain	w	l~r	y						
Fricatives									
Plain	f	s	ʃ	ɬ				x	h
Simple stops									
Plain	p	t	c	tɬ	(ǁ)	ǀ	ǂ	k	ʼ
Voiced	b~β	d	ɟ					g	
Complex stops									
Plain + As	p(f)	t(s)h	ch	tɬh		ǀh		k(x)h	ʼ
Plain + Gl				tɬʼ		ǀʼ	ǂʼ	k(x)ʼ	
Stop clusters									
Plain + /x/						ǀx			
Nasals									
Plain	m	n	ɲ			ŋǀ		ŋ	

Table 5: The tentative consonant system of Kwadi

The data suggests also that there are probably preglottalised nasals in Kwadi, (ʼɲ see 'eat', 'top (of)', (09), and ʼm 'sleep' (02) below, although the transcriptions sometimes have a nasally released plosive for the former).

The columns in the remainder of this section are arranged as follows:

Gloss	**Proto-Khoe (unless otherwise stated)**	**Kwadi**

2.2.a. Pairs without major sound changes

We start the comparison between Khoe and Kwadi with a list of lexical pairs, which are fairly close in shape and do not involve major sound changes.

(01) big   *kai   kye, tya [?< /ke/]

big	*kai	kye, tya [?< /ke/]	
bite	*pa	pa-	
blood	*ǀ'ao	ǀ'o- (ǀo- {W2-6})	
boy?	kx'aro (Ka) {W1-139}	kolo-, *plural* {W1-139} [?= /kx'olo/]	
come	*ha	ha {W2-5}	
cow, cattle	*goe (WKa)	goe- {W1-141}	
dog 1?	*ari (Kk)	ayi- {W2-5}	
dog 2?	ha(d)u- (WKa)	'au- {W1-141}	
drink	*kx'a	kx'a (ka {W2-5})	
female?	*tara (Kk)	tala, *plural*	
go	*ǃũ, *kũ (EKa)	kõ (ko {W2-5})	
grasp, take	*se	se	
hear	*kum (Ka)	kum (kũŋ; ku {W2-6})	
male	*kx'ao	k"o- [= /kx'o/] {W1-139}	
meat	*kx'o 'eat (meat)'	k"o- [= /kx'o/] {W1-141}	
medicine	*tso, *so (Kk)	so- {W2-4}	
milk, breast	*pi	pi-/ bi- {W1-141}	
mouth	*kx'am	kx'ami- (kame {W2-5})	
night	*thu	thwii [< /thu-/] {W1-143}	
one	*ǀui	ǀui {W2-7}	
pain	*thũ	thõ, thũ 'illness'	
person	*khoe	kho- {W1-139}	
sheep	*gu	guu- {W1-141}	
skin, fur	*kho, *also* kxo	kxo- {W1-143, 4-1}	
smell	*mm (Ka),*ham (Kk)	mh(u)	
throat	*dom	tumu-, *also* 'swallow' {W1-141, 4-1}	
tongue	*dam	tame- {W1-141, 4-1}	
year	*kudi, *also* kuri	kuli- {W1-143}	

When evaluating these and following comparisons, it should be taken into account that the available material is inherently problematic, for two reasons: (a) Westphal's data are raw field notes, based on his own research of a short time period or on partly defective audio-recordings by A. de Almeida (this is inter alia evidenced by the amount of inconsistent transcriptions) and (b) language data from across Southern African Khoisan are generally characterized by alternate transcriptions whose phonological status is uncertain. Typical alternations, found in the above table as well as in other cases below, are the following (lexical examples in parentheses):

(a) oral vs. nasalised vowel ('go', 'hear', also 'two' below)

(b) vowels *u* vs. *o* and *i* vs. *e* ('go', 'pain', 'throat')

(c) plain vs. glottalized click ('blood', also 'two' below)

(d) plain vs. glottalized non-click ('boy', 'drink', 'mouth', also 'heart' below)

(e) plosive *kh* and *k'* vs. affricate velar *kx* and *kx'* ('skin')

(f) voiced vs. voiceless stop ('milk~breast', 'throat', 'tongue')

(g) plosive *d* vs. sonorant *l* and *r* vs. glide *y* vs. zero ('dog 1')

(h) different articulation places with, especially fricativized, egressives ('big', also 'female', 'head', 'cook' below)

2.2.b. Pairs involving lateral clicks

The consonant chart of Kwadi in Table 5 reveals that lateral clicks do not present an important segment type; in fact, there is only one word with ‖ in the data, which even displays a transcription variant without it. Words with lateral clicks in Khoe have two potential correspondence types in Kwadi.

First, there are several lexical pairs which could reflect a change in which a complex lateral click attested in Proto-Khoe has undergone click loss under retention of the click accompaniment in Kwadi.

(02) die?   *‖’o   kade ’o [?< ‘death die’]
                                          {W2-7}
      fish   *‖’au (Ka)   ’au- {W2-5}
      open   *‖xobe,*‖xode (Ka) xoe-
      sleep   *‖’om   ’mu, *also* ‘lie down’

Second, the simple lateral clicks ‖ and g‖ in Khoe have potential counterparts in palatal fricative egressives in Kwadi, which might be the result of click replacement.

(03) female?   *g‖ae (Ka)   tce {W2-4} (kie {W1-139})
      tooth   *‖ũ   tʃõ {W2-5, 4-1}

2.2.c. Pairs involving alveolar clicks

Alveolar clicks are entirely absent from the Kwadi data. There are three comparative pairs where a plain alveolar click ! in Proto-Khoe seems to correspond to a velar fricative egressive x in Kwadi.

The click replacement ! > k is still attested for the relevant items within Khoe; compare also 'go' in (01). A subsequent change of fricativization, k > x, would have to be assumed as a Kwadi-internal process.

(04) penis   *!am, *also* kam   xami- {W3-2, 4-3}
      want   *!a, *ka (EKa)   xa, xe
      zebra?   g!ua-, ku(a) {W1-142}   xwa- [?= /xua/] {W1-142}

There are two Kwadi items showing a velar ejective affricate, which could be assumed to originate ultimately in a glottalized velar click !'. The click replacement to be hypothesized for Kwadi would be !' > k' > kx' (cf. the previous comparable change). The situation would be complex, though, because the additional change !' > ‖' would have to be assumed for Khoe 'cough'. If accepting the possibly allied, but weaker comparison for 'liver', Kwadi would have undergone !' > ‖' > tʃ' (with a following replacement of the glottal gesture) and Khoe !' > k' > kx'.

(05) afraid, be *!'ao   kx'u-
      cough   *‖'ui   kx'oi
      liver?   *kx'ãĩ   tʃe'e {W4-3}

2.2.d. Pairs involving dental and palatal clicks
The most prominent clicks in Kwadi are dental, and to a lesser degree, palatal ones. For these, there are several types of potential correspondences with Khoe. These differ, however, considerably, so that the overall picture is fairly irregular.

The retention of dental clicks in Khoe and Kwadi can be observed in the pairs below.

(06) blood   *ǀ'ao   ǀ'o- (ǀo- {W2-5})
      fem. genital   *ǀĩ 'vagina'   ǀen- 'clitoris' {W4-3}
      hair   *ǀ'ũ   ǀo'm {W2-5, 4-1}
      one   *ǀui   ǀui {W2-7}
      star?   *ǀxani (Ka)   ǀxo- {W2-5}
      two   *ǀam   ǀa, ǀã {W2-7}
      urinate   *ǀxam   ǀhã- {W3-2, 4-3}

There is a small and quite doubtful set of pairs for which one would have to assume that a dental click ǀ in Khoe corresponds to a palatal click ǂ in Kwadi. Note that two of Westphal's words have a plain click ǂ; only by assuming that these are transcription errors and the clicks are in fact glottalized, could one speculate on the existence of a regular correspondence Khoe ǀ' vs. Kwadi ǂ'.

(07) bone   *ǀ'õã   ǂ'ã-
      fire?   *ǀ'ai, *ǀ'e (Ka) ǂẽẽ {W1-144, 2-5}
      steal? *ts'ã, *ǀx'ã (Kk) ǂaŋ {W2-4}

Conversely, with respect to the loss of palatal clicks, non-glottalized palatal clicks in Khoe may have Kwadi counterparts in fricativized alveo-palatal non-clicks. These pairs are given in (08). If the entire series were to be accepted, this type of click replacement would be an irregular, broad correspondence. Note, however, that Westphal's field notes display a particularly inconsistent transcription involving fricatives and affricates.

(08) black?   *n‡u   dzu
      eye?   *‡xai   ʃi- {W1-140, 4-1}
      head   *‡u (WKa), *also* cu tshũ- {W1-140} (ʑum'
                                          {W4-1})
      heart   *‡ao, *also* c(a)o   ts'o- {W1-140} (tso-
                                          {W3-2})
      nose   *‡ui, *also* cui   tʃwi- [?= /tʃui/] {W1-140}

Other pairs show a palatal click in Khoe and a simple glottal stop in Kwadi, suggesting again click loss on the Kwadi side; with 'eat' and 'top', the change is also attested in East Kalahari.

(09) buy   *‡ũ   'ũa-
      eat   *‡'ũ, *'yũ (EKa)   'ɲũ
      top (of)   *‡'am   'ɲaː

A single pair implies palatal click retention in both units.

(10) back   *n‡a- (Ka)   ‡ã- {W3-3}

2.2.e. Pairs involving fricativized egressives

Several lexical pairs could be subsumed under the following broad correspondence: an alveolar affricate or fricative in Khoe has a phonetically weaker counterpart in Kwadi (either an alveolar or glottal fricative), implying lenition on the part of Kwadi.

(11) cook   *tsã(i)- (Ka)   sẽ {W2-4} (θẽ)
      foot   *dzĩ   ze- {W4-2}
      medicine   *tso, *so (Kk)   so- {W2-4}
      parent?   sa(u) {W1-140}   ha {W1-140}
                    [? 'your parent']

2.2.f. Pairs involving vowel features

The potential correspondences with respect to vowel features are somewhat more regular. A first alternation seems to exist between a final nasalised vowel in Khoe and a sequence of an oral vowel and a nasal consonant in Kwadi; two apparent cases with the reverse situation also exist, however.

(12)
Ṽ vs. VN

fem. genital	*ǀĩ 'vagina'	ǀen- 'clitoris' {W4-3}
hair	*ǀ'ũ	ǀo'm {W2-5, 4-1}
leg	*tĩ	tin- {W3-3}
rest	*sã	seŋ
see	*mũ	mun-
steal?	*ts'ã, *ǀx'ã (Kk)	ǂaŋ {W2-4}

VN vs. Ṽ

two	*ǀam	ǀa, ǀã {W2-7}
urinate	*ǀxam	ǀhã- {W3-2, 4-3}

A second set of lexical pairs shows a word-final m in Khoe having a potential Kwadi counterpart with m followed by a vowel. Note, however, that Kwadi does possess words with final m (e.g., *kum* 'hear', *ǀo'm* 'hair').

(13)	mouth	*kx'am	kx'ami- (kame {W2-5})
	penis	*ǃam, *also* kam	xami- {W3-2, 4-3}
	sleep	*ǁ'om	'mu, also 'lie down'
	smell	*mm (Ka),*ham (Kk)	mh(u)
	throat	*dom	tumu-, *also* 'swallow' {W1-141, 4-1}
	tongue	*dam	tame- {W1-141, 4-1}

A final pattern in the data is that a sequence of unlike vowels in Khoe is simplified in Kwadi to a sequence of identical vowels, which can be viewed as regressive assimilation. The potential correspondences are: ao vs. o/u, ai/ae vs. e/i (possibly with a subsequent palatalization of a velar segment in Kwadi, cf. 'big', 'female'), and possibly also oa vs. a.

(14)
ao **vs.** *o/u*

afraid, be	*!'ao	kx'u- [?~ kx'o]
blood	*ǀ'ao	ǀ'o- (ǀo- {W2-5})
boy?	kx'aro (Ka) {W1-139}	kolo-, *plural* {W1-139} [?= /kx'olo/]
heart	*ǂao, *also* c(a)o	ts'o- {W1-140} (tso- {W3-2})
male	*kx'ao	k"o- [= /kx'o/] {W1-139}

ai/ae **vs.** *e/i*

big	*kai	kye, tya [?< /ke/]
cook	*tsã(i)- (Ka)	sẽ {W2-4} (θẽ)
eye?	*ǂxai	ʃi- {W1-140, 4-1}
female?	*gǁae (Ka)	tce {W2-4} (kie {W1-139})
fire?	*ǀ'ai, *ǀ'e (Ka)	ǂẽẽ {W1-144, 2-5}
liver?	*kx'ãĩ	tʃe'e {W4-3}

oa **vs.** *a*

bone	*ǀ'õã	ǂ'ã-

Several points can be summarized from the above comparisons. First, the data do not yet allow one to identify many sufficiently regular sound correspondences. This is mostly due to two factors, first the small number of potential cognate sets regarding a particular sound change (in turn caused by the limited data on

Kwadi), and second the variable and therefore inconclusive transcriptions of the Kwadi lexemes.

One general trend can be observed, however: several potential cognate sets would suggest that Kwadi underwent different types of lenition processes, inter alia a fairly heavy click loss in general and the virtually complete replacement of lateral and alveolar clicks in particular (cf. Sections 2.2.b and 2.2.c). This corresponds with the comparison of the consonant inventories in Tables 4 (Khoe) and 5 (Kwadi): the latter displays less complexity in the system and has an inventory with overall weaker segments. In particular, it has only two clearly recognizable click series, dental and palatal.

For the above reason, not all the compared items given here are intended to be taken as established cognates inherited from the common ancestor language Proto-Khoe-Kwadi. It is very possible that besides true etymologies the comparative tables include spurious correspondences. Some items could be similar or identical because of parallel borrowing and loan nativization; for example, *goe* 'cow' in both Kwadi and Kalahari Khoe could be a Bantu loan which underwent similar sound changes *gombe > *gobe > *goe. Other words might be similar due to more universal patterns of sound symbolism; compare in this respect the pair *ha(d)u-* in West Kalahari and *'au* in Kwadi for 'dog2'. Finally, similarities in sound shape may simply be too loose and/or coincidental. A more systematic study is certainly necessary.

However, the major objective of the present work is to show that Kwadi and Khoe do share a considerable amount of vocabulary and to give some directions for further research. Especially given the comparative lists with three or more good matches like (01), (02), (06), (08), (11), (13), (14), and (15), it is justified to state that the lexical affinity between the two units is fairly strong, given the very limited data available for Kwadi.

A lexical proximity is observed recurrently between Kwadi and its geographically closest subgroups of Khoe. Compare in this respect the words which Kwadi potentially shares with Kalahari Khoe like 'back', 'cook', 'hear', 'female', and 'fish'; or with West Kalahari like 'cow', 'dog2', and 'head'. This seems to be parallel to findings by Güldemann (forthcoming a) regarding person-gender-number marking. The general phenomenon could be motivated by two factors. First, the affinity between Kwadi and northwestern Khoe goes back to Proto-Khoe-Kwadi and the more remote Khoe languages have innovated in a different areal context. Second, the similarities were mediated by later contact between Kwadi and some Khoe neighbors (this would not have been recent, however, because the two are not geographically adjacent today). In any case, future research should envisage a deeper comparison between lexical forms of Kwadi and their counterparts in Kalahari Khoe, West Kalahari , or even the Kxoe sub-group.[6]

3. The relationship between Khoe-Kwadi and Sandawe

The second candidate for a fruitful comparison with the Khoe family and Kwadi is the East African click language Sandawe. On the one hand, it shows typological affinities to precisely these two units of Southern African Khoisan (see Heine and Voßen (1981: 429-35) and Güldemann (forthcoming d)). On the other hand, its hardly substantiated assignment to the dubious Khoisan group aside, it is the only language outside southern Africa for which some promising evidence for a genealogical link to the core of Khoisan has been presented by Elderkin (1986, 1989), again involving the Khoe family (cf. also earlier contributions to this hypothesis, often focussing on Sandawe affinities with Khoekhoe in particular, such as Trombetti (1910, 1922/3), Dempwolff (1916), Drexel (1929/30), and Köhler (1973/4)).

We will try in the following to give partly new evidence from morphology, firstly personal pronouns, using the methodology provided by Güldemann (forthcoming a); this will be followed by pronominal and other evidence in grammatical formatives prompted by Voßen (1997); similarities already given in Elderkin (1986) will not usually be repeated. We add notes on lexical correspondences, again mainly with reference to the Proto-Khoe forms established in Voßen (1997) as modified by Elderkin (ms).

3.1. Personal pronouns

Honken (1977) has claimed that there exist a number of etymological relations between pronominal elements across all Khoisan lineages, including Sandawe. However, his comparison of pronominal items in individual Khoisan languages does not comply with normal standards of the comparative method and principles of diachronic typology. On the basis of the available reconstruction of the pronominal marking in Proto-Khoe-Kwadi, the issue of a relation between this unit and Sandawe can be addressed now in a more stringent way; such an analysis can rely on the entire proto-system of a fairly old language state that gave rise to the major Khoisan lineage and the findings resulting from it reach further back in time.

The system of free pronouns in Sandawe, which is to be compared with that of Proto-Khoe-Kwadi, is displayed in Table 6 (after Elderkin 1989: 26).

	Singular	Plural
1st person	tsi	sũ:
2nd person	hapu	sĩ:
3rd person masculine	he-we	he-so
3rd person feminine	he-su	he-so

Table 6:   The system of free pronouns in Sandawe

Comparing the structural properties of pronominal marking in Sandawe with those in Proto-Khoe-Kwadi (see Table 3 above), the following can be summarized. Sandawe has no trace of a minimal-augmented system with a 1st-person dual inclusive form; it lacks in fact any kind of inclusive~exclusive distinction. The two systems are comparable, however, in a few other characteristics. First, both show a distinction between predominantly simplex forms for speech-act participants and morphologically complex forms for 3rd persons. More specifically, the 3rd-person forms are composed of an invariable pronoun base and a set of gender-number suffixes; in both, the gender opposition is masculine vs. feminine and the number features are singular and plural.

Looking at the phonetic shapes of functionally corresponding items, the form-meaning affinities are as in Table 7 (all but that in the 2nd row have been noted already by Köhler (1973/4: 190)).

	Sandawe	**Proto-Khoe-Kwadi**	
1st pers. sing. pronoun	tsi	*ti	(Kwadi tʃi)
2nd pers. sing. pronoun	ha-	*sa	
3rd pers. pronoun base	he-	*xa-	(Kwadi ha-)
3rd pers. masc. sing. suffix	-w(e),-m	*-V$^{[front]}$	(Khoe -bV,-mV)
3rd pers. fem. sing. suffix	-su	*-V$^{[front]}$	(Khoe -sV)

**Table 7:   Affinities between pronominal items
of Sandawe and Khoe-Kwadi**

Some affinities in Table 7 are fairly clear. The palatalisation in the first person is slightly disguised by the transcription (*tsi* is nearer [tʑi]). The third person (nominal) suffixes *-w*(*e*), *-m* and *-su* are in principle found with either a high or low tone but this is a demonstrably Sandawe internal development. One interesting thing is the presence of the usually masculine labiality (as a component of *-u*) in the feminine *-su*.

Other affinities in Table 7 are less clear and/or difficult to evaluate. If *he-* is seen as a pronoun base, it is a specialisation of the demonstrative base of the same form; a second demonstrative base is *ha-*. *he-* appears in two series, in the forms *hè-* and *hě:-*. *ha-* similarly appears in both forms, *hà-* and *hǎ:-*, but when used in *hà-* type forms, it is interrogative. The fact that *hàpú* is not interrogative strengthens slightly the case for relating the initial *ha-* there to the Proto-Khoe-Kwadi *sa-*. If *ha-* is indeed a second person singular pronominal form, then it always appears with *-pu*, which, in the form *-po*, is used on its own as an unambiguously second person nominal suffix.

One further, and now, in view of Güldemann (forthcoming a), ambiguous, pronominal matter may be mentioned. Elderkin (1986: 145-6) gives reasons for assuming that in pre-Sandawe there was a third person marker with the forms *ʔi* and *ʔa*. Voßen (1997) gives many examples of markers of the third person with the forms *ʔi*, *ʔe*, and *ʔa* seeming to function as the pronoun base; as a noun suffix

for common singular, Voßen (1997) reconstructs *ʔi for Proto-Khoekhoe, and as a third person common singular personal pronoun, he reconstructs *ʔi for Proto-Khoe. However, Güldemann (forthcoming a) suggests that *ʔi as a person-gender-number marker is a Khoekhoe innovation.

We therefore conclude 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. However, the general formal and functional affinities between their pronominal markers are sufficient for viewing the existence of such a historical link as a promising hypothesis, which on their own would warrant further research.

3.2. Other grammatical elements

The demonstrative bases *ha-* and *he-* have already been mentioned in the discussion of pronouns. *ha-* is also found in Sandawe interrogatives with a high tone, *hákừ* 'where', and *hô* (? < *há* + *ẁ*) 'who', (cf. *hàwé* 'which'). There is no comparable interrogative form reconstructed for Proto-Khoe, Proto-Khoekhoe *hàḿ* 'which' is phonologically the only match in Voßen (1997) (cf. also the non-interrogative *hẫ́ḿ* 'everyone, everybody, each' of Namibian Khoekhoe (Haacke and Eiseb 2002: 47)).

Let us note that the demonstratives which Voßen does reconstruct for Proto-Khoe, *ǀ̃éè 'this [near]', and *ǁàá 'that

[distant]', seem to appear declicked as Sandawe *né-* and *ná-* used in a comparable way.

Dempwolff (1916: 69) noted the comparability of Namibian Khoekhoe forms with *-se* and Sandawe forms with *-se*. Namibian Khoekhoe has mainly nominalising forms with *-s-* and *-x-* (adjectives: intransitive verb stem + *-sá̋*, transitive verb stem + *-sà̋*, noun stem + *-xà̋*; noun: adjective stem + *-sȉ̀*; adverb: adjective stem + *-sè*); the Sandawe suffix is *-sí-* 'having', and it requires a nominal person-gender-number suffix, thereby forming a nominal. Voßen (1997) does not include these Khoekhoe suffixes in his Khoe reconstructions. Their relation to each other (and to Kxoe forms with *-x-* (adjective: verb stem + *-xà̋*; adverb: verb stem + *-xá́*, see Köhler (1981)), although plausible, must await forms from Khoe languages first being made relatable to a Proto-Khoe form.

Within the verb stem, Voßen (1997) is able to reconstruct extensions; he also reconstructs markers of mood, tense and negation which lie outside the verb stem.

(i) Extensions on verbs

Verb stems can be formed from verb stems by suffixed extensions. Of the nine items Voßen found in the contemporary languages, only three could be reconstructed for Proto-Khoe; of these, only one seems to have relevance for Sandawe.

The dative *-ma- (a grammaticalisation of Proto-Khoekhoe *máà ~ Proto-West Kalahari *ma̋à ~ *máà 'give') does not appear in Sandawe as an extension but as a postposition, -mě: 'for'.

It is however worthwhile noting the causative extensions, Proto-Kalahari *.ka(=xu) and Proto-Khoe *.si, (which has only a meagre attestation in Kalahari Khoe, and which Güldemann (forthcoming e) identifies as a possible innovation in Khoekhoe from Taa). These can be compared to the following Sandawe extensions, both fossilised.

(15)   -kṵ̀   ǀ'ě: to look at   ǀ'ékṵ̀ to waken
        -sé   náʔ̥̀ to be alight   nàʔ̥ sé to light

Sandawe -kṵ̀ is frequently found following -sú-; the origin of this -sú- (which probably takes its vowel quality from the following -kù) is not clear: the hunt would lead us to -sí- (above) and -sṵ̀- (see below).

(16)   -súkṵ̀   ǁ̥ě: to enter   ǁ̥ě:súkṵ̀ to put in

A fuller analysis of both Khoe and Sandawe forms is desirable to give credence to these juxtapositions. The non-diagnostic character of causative formatives with -s- is well known. West Rift, for example, has -is- causative (Kießling and Mous 2003: 22).

There is also a Sandawe form -sṵ̀, which (pace Kießling 2002: 65) is best not identified as a causative formative; it is suffixed to

noun stems. It possibly will prove better to relate it to Sandawe *-sí-*, although the mechanisms of this are unresearched.

(17)   -sǐ̥   ǁʰwě: dirt   ǁʰwě:sǐ̥ to be dirty

 (ii) Mood

There is no passive in Sandawe, and the question of junctures will be prætermitted here, except to note that in the very post verbal stem position where these markers occur in Khoe, there is often an intractable *-é* in Sandawe, the historical meaning and use of which has not been adequately investigated or explained.

 (iii) Tense

Three tense markers are firmly reconstructed for Proto-Khoe. Voßen admits that the data available to him, (except for Kxoe and Namibian Khoekhoe), is not adequate to make statements about their use or meaning. The expedient of listing the varied labels appropriate in the present day languages is used here, the reader should refer to Voßen (1997: 361-362) for details.

Each has a point of comparison in Sandawe.

   (a) Proto-Khoe *ko

            (near past, preterite, gerundive, present, (future))

Sandawe has several suppletive pairs of verb stems, of which one is appropriate with a singular subject, the other with a plural subject. One such pair is *ʔíé* (Sg subject) *ně:* (Pl subject) 'to stay,

remain'. *ně:* is often found nominalised by the suffixation of *-sí-* which requires a following nominal person-gender-number marker:

(18)   ně:sísṳ̌: 'we're here'

However, the usual singular stem in this construction is *kó:*.

(19)   kó:sísị̊ 'I'm here'

Taking *kó:* as a verb stem, the pair *kó:/ně:* can be glossed as 'to be present'. *kó:* has not been found other than in this construction with *-sí-*; the assumption that it is a verb stem rests on its suppletion with *ně:*.

(b)   Proto-Khoe *hã
        (perfect aspect, durative preterite, imperfect, general past, (distant) past)

Voßen relates this to a verb stem which still appears as such in some Khoe languages, *hãa*, meaning 'to be (in a place)'. Sandawe has *hǎ:nàkí* 'to sit'

(c)   Proto-Khoe *ke
        (distant past, perfect, present, very near past)

The tense marker Proto-Khoe *ke* (in Namibian Khoekhoe *-kè*) may be compared with the Sandawe declarative morphemes *gê* and *ké:*; underlying these could be seen the assertion 'be', relatable to the sense 'become' deriving from the verb stem *kài* 'to become, grow' which in turn relates to Proto-Khoe *kái* 'large' by flipflop.

Here again we have an ambiguity: Sandawe declarative morphemes *gê* and *ké:* can also be compared with the Namibian Khoekhoe 'sentence type marker for indicative main sentences' (Haacke and Eiseb 2002) -*kè*, which Güldemann (forthcoming e) assumes is borrowed from !Ui, and therefore is not the same as Proto-Khoe **ke* as tense marker.

 (iv) Negation

   Two negatives are reconstructed for Proto-Khoe, the second on a less firm basis.

(20)   *tama
        *tite

   There are two formatives which are used in negative constructions in Sandawe, -*ts^hì* which is also used as a privative postposition, and *mě:* which is negative only in the imperative, (used elswhere it gives the derived idea of something nearly happening, not the idea of not happening). Until the structure and history of the two Proto-Khoe negatives is established, any significance remains the coincidence of a syllable with an initial m and a syllable with an initial t (palatalised before i).

3.3. Lexical comparisons
In lexical comparison, Dempwolff (1916) is scholarly cautious; what Greenberg expects us to understand by his lists of

comparative series is open to academic discussion; Ehret (1986) bluntly postulates starred consonant forms for Proto-Khoisan, presenting his own reconstructions of whole stems in only a few instances, otherwise basing his Khwe forms on Baucom (1974). The comparison of morphology and syntax raises the expectations of a confirmatory lexical link between Khoe and Sandawe; the publication of Voßen (1997) dashes hopes that the establishment of correspondences acceptable to the canons of the comparative method is easy. It is easy, as Köhler (1973-74) does, to point to a 'beträchtlichen Fremdeinfluß' (massive foreign influence); it is less easy to give sources for that 'influence': having extracted the Bantu, the Southern Cushitic and the Datog, there is still much unaccounted for – a deeper knowledge of the Bantu, Cushitic and Nilotic donor languages will reduce the number of items of obscure origin; a large residue can be expected. It must not be overlooked that the foreign influence might equally have been from other, not immediately related, now defunct, Khoisan languages.

But equally, there will be more to Proto-Khoe than has been extracted, most recently in Voßen (1997). We can hope for more reconstructions as more data become available, and occasionally existing starred forms will be refined; we await eagerly the anticipated availability of work in Sandawe lexicography, both that of ten Raa and of scholars currently in the field.

Whereas both Bantu and Nilotic languages are thought not to have been present in East Africa with such a time depth as to allow influence on them from languages ancestral to or related to Sandawe and Hadza, Southern Cushitic[7] is more likely to have both received and given; where there is a Southern Cushitic comparison, there is an ambiguity: Ehret (1986: 121) wants "the conversion of many sounds not originally clicks into clicks during the evolution of proto-Southern African Khoisan"; Kießling and Mous (2003: 39) say that the "extraordinarily high frequency of the ejectives *ts [*ts'] and *tl [*tɬ'] [sc. in Proto-West Rift] suggests that they are the result of a convergence of several former click phonemes: an adaptation of Khoisan vocabulary to Eastern Cushitic standards …".

The other reaction to the meagre set of correspondences is to conclude that there is no special relation between Sandawe and Khoe, and to seek to draw on comparisons from other Khoisan families like Ju (alias Northern Khoisan) and Tuu (alias Southern Khoisan); ultimately it will be a question of quantity and quality.

This section comments on correspondences and similarities between Sandawe and Khoe, where Khoe is Voßen (1997), with occasional recourse to Haacke and Eiseb (2002) on Namibian Khoekhoe and Visser (2001) on Naro. It also comments on similarities previously noted, but which deserve caution, if not dismissal.

Forms quoted as Proto-Khoe are based on Voßen's reconstructions, but incorporating modifications and tone marking from Elderkin (ms). (Note that this study finds justification for only one series of nasalised clicks; the so called voiced nasalised clicks (see Table 4) are susceptible of another interpretation.) Where a form is reconstructable from Namibian Khoekhoe (NKk) and Naro (N) only, it is referred to as a common form NKk+N, for example, *!ˀóá 'to meet'; such reconstructions should preferrably have a starred form for East Kalahari Khoe in order to be offered as Proto-Khoe: there is Khoekhoe influence in Naro. The symbols for Proto-Khoe initial consonants differ trivially from those used in Table 4 above and earlier discussion and in Voßen (1997). Where specifying a proto form, 'Proto-' is omitted where an asterisk follows. The columns in the remainder of this section are arranged as follows:

Sandawe　　　　　**Proto-Khoe**
　　　　　　　　　　　(unless otherwise stated)

3.3.a. Glottalised click efflux

Forms with any glottalised accompaniment are comparable.

(21)　∥'ǎːkí to fight　　　　*∥'ǎ̂à to fight
　　　∥'ô to sleep　　　　　*∥'óm̀ to sleep
　　　∥'íné to be ripe　　　　*∥'ání to ripen
　　　!ǒː to get, !ǒːkí to meet　*!ˀóá to meet (NKk+N)

Two comparative series suggest that the starred palatal click has a reflex in Sandawe as a dental click.

(22) |ʼǽːkì̥ above   *ǂʼám̀ top (of)[8]
      |ʼěː to see   *ǂʼán̋ to know

3.3.b. Oral pulmonic effluxes

Voiceless click corresponds to voiceless click.

(23) ǀ̥èẃ buffalo   *ǀáò buffalo
      ǃ̥óːmé to fill   *ǃ̥óm̋ (to be) heavy

Voiced clicks are relatively rare in Sandawe; two correspondences with Proto-Khoe voiced clicks show voiceless clicks in Sandawe.

(24) ǀ̥ǎː leaf   *ǀ̥ana *ǀ̥ã́ã̌ leaf, grass
      ǀ̥ã́ːtímà fly (musca)   *ǀ̥ani fly

3.3.c. Nasalised efflux

No really good comparative series with the Proto-Khoe nasalised clicks were noted.

3.3.d. Palatal click

Two examples of possible loss of the palatal click in Sandawe can be given:

(25) kǔː red hot coals   *ǂ̃òm̀ (*ǂ̃ùm̀) charcoal
      kéké ear (also kʰèʔé to hear *ǂ̥àé ear
        aspiration predictable before ʔ)

3.3.e. Laterals

Two examples in the literature seem to show a nasalised lateral click corresponding to a voiceless oral lateral plosive, a correspondence which requires explanation.

(26)   tláná horn   *‖ã̂ã̃ horn

It is usually assumed that nasalised vowels can be referred to a sequence VNV. Voßen notes an absence of nasalisation of the vowel in all his recorded Kalahari forms for this etymon. If the etymology for 'coal' in the preceding section is allowed, 'horn' could give a second example of a starred nasalised click corresponding to a Sandawe voiceless oral plosive.

(27)   tlâ bark   *‖au kaross (Khwe by Ehret)

But the semantics need further explanation, and, worse, Ehret's starred form, (*‖au), is inexplicable; it is one of eight starred Khwe forms which he gives and which are not found in Baucom (1974): it is not supported, as far as we know, by data. *tlâ* is also glossed 'door', which could point to the next comparative series, (*‖̪ãũ 'to fence').

However, two possible comparisons between Sandawe tl and *‖̪ are:

(28)   tlíné to build   *‖̪ãũ to fence
        tlôkṳ̀ (-kṳ̀ *causative*) to pour *‖̪óé to lie down

Neither dʒ nor ɬ in Sandawe seem to have any cognate in the known Proto-Khoe reconstructions. The often cited pair in (29) requires too much special pleading.

(29)   dʒòmó to buy   *‖'am(a) to acquire, buy

3.3.f. Lateral ejectives

One often quoted form has the Sandawe lateral ejective ƛ'.

(30)   ƛ'ṵ̂ː arm   *‖'ő̂ã arm

As there have been several examples of Sandawe ‖'
corresponding to *‖', this might be seen as a possible *ƛ' which
remained in Sandawe, but became *‖' in Proto-Khoe. There are
two counter indications. Firstly, Kießling and Mous (2003)
attribute the Sandawe item to West Rift *ƛ'ubaʕa 'upper arm'
which has 'convincing Cushitic cognates'. Secondly, the
comparison in (31) shows a different Proto-Khoe initial consonant.

(31)   ƛ'àpé to hit (cf. also ƛ'ùpé   *‖ˣ̩ám̩ to hit, beat
             to hit, pound something wet)

But again we collide with Southern Cushitic; Kießling and
Mous (2003) relate Sandawe *ƛ'ùpé* to West Rift *ƛ'up- 'to smash'
for which a Proto-Eastern Cushitic form is quoted,*d̩ʲuf- 'to close,
shut'. To allow *ƛ'àpé* 'to hit' to enter the same series, it is tempting
to emphasise the 'depression' semantics for Iraqwoid *ƛ'apaː 'level
ground, depression' despite the fact that Kießling and Mous offer
for this a Proto-Eastern Cushitic cognate, *d̩ʲaff- 'meadow'.

This discussion should have well enough illustrated the dangers
inherent in uncontrolled speculation about ejectives; we can finish
this subsection by noting that Sandawe ƛ'wã̂ː 'rain' should be

derived from West Rift *tɬ'ub- 'to rain' and not any Khoisan etymon.

3.3.g. Other ejectives

The velar ejective however is much stronger in comparisons.

(32) k'éː to cry   *kx'àí to cry
      k'àmé alcoholic drink   *kx'áɱ́ mouth (cf. also
                                       *kx'áà to drink)
      k'útsʰè raw   *kx'òrà raw (NKk+N)
      k'àwàʔé ferment, turn sour   *kx'àú bitter

Kießling and Mous (2003) quote Proto-Eastern Cushitic *k'ar 'point, peak, top'; there are many Southern Cushitic reflexes of this root in the 'poison, bitter' semantic area, and its relation to the Proto-Khoe *kx'àú must be left open.

A similar comparsion is (33): Baucom reconstructs Proto-Central-Khoisan *k'aro 'boy' and Westphal (1965: 139) quotes reflexes of this; but Kießling and Mous (2003) have Proto-West-Rift *k'ari 'age mate' (e.g., in Burunge *k'àraʔimo* 'male youth').

(33) k'àrě: youth   *k'aro boy

The Sandawe ejective ts' appears less frequently in good comparisons. Mere identity of initial consonant as in (34) is not satisfying.

(34) ts'úk'à smoke   *ts'ánì to smoke (fire)

It is worth mentioning several comparisons in the literature which should not have been offered seriously until there is an adequate historical phonology to support them. None are prima facie convincing.

(35)   ts'â   water   *tsʰàá water (Ka)
       ts'wáʔá fingernail   *tsʰàú hand (Ka)
       ts'wǎ: tail   *ts'áó tail (Ka)
                              *tsʰàú hand (Ka)
                               tsòá anus, arse; to begin,
                                 start (NKk)

Proto-Kalahari *tsʰàá 'water' seems more likely as a cognate for Sandawe *tsʰàá* 'tear (lacrima)'. If they could be traced back to a Proto-Khoe source, several items in Namibian Khoekhoe with an initial /ʔa-/ and in the same semantic area would be better cognates to Sandawe *ts'â* 'water'. Vowel metathesis is a problem in two of these comparisons, as is the presence of pharygealisation (shown by ‸) in the Naro *tò̰á* 'anus' – pharyngealisation is not reconstructed for Proto-Khoe.

The literature has produced other comparisons between aspirated consonants and glottalised consonants; without compelling explanation, which might relate to an already problematic pharyngealisation, they should be treated cautiously. For example, the following comparison does point, somewhat uncertainly perhaps, to a former pharyngealisation; the correspondence of Namibian Khoekhoe !ʰ and Proto-Kalahari *!̃

favours this, but it has not yet been possible to systematise the tonal correspondence between the Namibian Khoekhoe 13 (!ʰṳ́ú 'soil, land, country') and Naro MM (ǀ̃úú 'to build (a hut)').

(36)   !'úmá country   !ʰṳ̀ú soil, land, country (Kk)
                               *ǃuu house, country (Ka)
                               (*ǃ̃ṳu ?common Khoe)

Finally, the following pair perversely shows the reverse correspondence!

(37)   tsʰ ̀ìná buttocks   *ts'ìí buttocks (Ka)

3.3.h. Velarisation

Proto-Khoe is reconstructed with two velarised consonant effluxes. One possible correspondence with a Proto-Khoe form indicates comparability between velarisation and Sandawe labiovelarisation.

(38)   ǀ̥wêː eye   *ǂˣáí eye (to wake up)

To this may be added, with lesser generality within Khoe:

(39)   ǃwǎː place, opportunity   *ǃˣáì place, matter (NKk+N)
        ǃwê rope of leather, pork ǃˣáí vein, rib in leaf (Naro)[9]
          chop, something hard

But here we move too far from reconstructed Proto-Khoe.

3.3.i. Pulmonic consonants

In the absence of regularities, comparisons with Proto-Khoe here too with pulmonic consonants are often weak.

(40) gìrìbé run (*plural subject*)   *bèè to flee, run away
      swáː to peel off   *tʰudu to skin, pluck
      swê pus   *tʰùí wound
      tʰṵ̌ː darkness   *tʰùú night
      tʰḭ̌m to cook   *tsã̰(i)- to cook (Ka)
      tsʰô excrement   *tsuu excrement
      tím̀ to swallow   *tóm̀ to swallow
      táné to pull   *tan to get up, raise (Ka)
                                            tánì to carry (NKk)
      hàwé to draw water   *hàdè to fetch (water), pick
      hàká four   *haka four
      hìmé to smell (*intransitive*)   *ham to smell
      hă̰ːnàkí to sit   *hã̰ă̰ to be present, *hã́á to
                                            stay, dwell (pre-Kk)
                                            hã̰ằ to be, hàna̍ to be
                                            (there), exist (Naro)
      síé to take   *séè to take, grasp (Ka)

We are aware that some of the series quoted above are weak. The tone on *haka cannot be reconstructed because of its abnormality in Namibian Khoekhoe; to isolate -*bé* from *gìrìbé* leaves an inexplicable *gìrì*; absolute certainty on all phonological correspondences of *tan would strengthen the murky semantics. Yet others in the literature either use incorrect glosses (*xòxõ̌ː* = Swahili 'beads' (*u*)*shanga*, not 'sand' *mchanga*), ignore a better Southern Cushitic etymon (*tónó* 'crown of head', *tíní* 'brain' better from or cognate to Proto-West Rift *tanaʕu 'fontanel, brains' (Kießling and Mous 2003) rather than the isolated Namibian Khoekhoe *tằná* 'head'), or rely on semantics that not everybody has found convinving, a judgement which not even the present

authors will escape (Sandawe *hàwé* 'to draw water' vs. Namibian Khoekhoe *xàwǽ* 'to receive in cupped hands' + 'dish, vessel').

Verdict

The lexical evidence is modest and meagre, to say the least, and the verdict not proven, circumstancial 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. It is hoped that a larger basis for comparison will be established for Khoe and that within Khoe, and its component languages, internal reconstruction can establish how stem and suffixal formatives can be extracted from the canonical morph shapes.

Some of the probable Khoe-Sandawe correspondences also extend into Kwadi: 'boy', 'cook', 'eye', 'mouth/ drink', 'night', 'sleep', 'smell', 'swallow', and 'take'. Occasionally, a Kwadi-Sandawe resemblance is also noted, but corroborative evidence is needed to eliminate the possibility of accidental similarity.

	Sandawe	**Kwadi**
(41)	pĕː to put (*singular object*)	pɛ to put
	tsĕː head	tshẽ head (*pl* tshũ-[10]{W1-144})
	tʰĕː tree	tʃi- tree (t hi-[11] {W1-144})

4. Summary

We believe that good evidence has been presented here for a genealogical link between the Khoe family and the isolate language Kwadi. Since this evidence involves two independent linguistic domains, reconstruction of grammatical person-gender-number marking and lexical correspondences, and both cannot plausibly be accounted for by non-genealogical explanations, the reality of a language family Khoe-Kwadi is a rather firm hypothesis.

On account of the topological consideration that Kwadi is located in southwestern Angola, outside the core area of Khoisan, and of several linguistic and non-linguistic indications that the modern distribution of Khoe languages deep within southern Africa may not reflect the original situation, the ancestor language Proto-Khoe-Kwadi is most likely to have been spoken on the northern fringe of the Kalahari Basin.

The evidence for a group involving Khoe-Kwadi which also includes Sandawe, however, can still only be categorized as promising, although Voßen (1997) and Güldemann (forthcoming a) have each added new similarities. The link between Khoe and Sandawe has been promising for almost a century; we hope that this present paper has made the fulfilment of that promise a little more likely than it was.

In any case, both hypotheses are important for the general scenario regarding the early ethnolinguistic history in southern and eastern Africa. In the literature, reference has been made repeatedly to an origin for the Khoe languages outside their present territory and to the northeast. Bleek (1927: 63) writes for example:

> I think it is likely that the territory of the Northern and Southern Groups [i.e. the Ju and Tuu family of Southern African Khoisan, respectively] joined right through the Kalahari, not only in the west as at present; that the Central Group [i.e. the Kalahari branch of Khoe] occupied the land to the northeast of the Kalahari, probably extending to the Great Lakes and East thereof; that the original Hottentots [i.e. the Khoekhoe branch of Khoe] were members of this group.

Köhler (1973/4: 189), too, sees the origin of the Khoe family far to the northeast of their present area when stating that

> die Hypothese der Herkunft der Khoe-Sprachgruppe aus dem Nordosten des Kontinents (steht) auf einer solideren Basis [the hypothesis of an origin of the Khoe language group from the northeast of the continent (stands) on a more solid basis].

Indeed, finding the closest relatives of Khoe either at the very periphery of the Southern African Khoisan area or far outside it (i.e. Kwadi and Sandawe, respectively) can be taken as an indication that the distribution centre of the higher order unit might have been outside southern Africa and that their common ancestor

might ultimately originate far to the north of the modern focus of Khoisan, possibly even in eastern Africa.

Since Khoe is larger and can be projected backwards by reconstruction, it has been usual to investigate and emphasise those features in Sandawe, and later also Kwadi, where these are similar with Khoe, thereby trying to factor out the foreign contributions to these languages, and the innovations within them. The reverse is also possible: instead of asking how Sandawe and Kwadi are similar to Khoe, we can ask how Khoe is similar to Sandawe[12] and Kwadi and then consider the possibility that at least some of the points where there is no similarity are attributable to foreign influence on Khoe. Güldemann (forthcoming e) has started to do this for the Khoekhoe branch of Khoe; a more solid understanding of the Kalahari languages would allow comparable investigations there. One topic to be covered would be, for example, why Khoe displays a canonical morph structure similar to that in the other Khoisan families, Ju and Tuu. We also hope to have given with this paper more substance to this general idea, namely that historical explanations for the linguistic commonalities across Southern African Khoisan not only require scenarios of gradual divergence between genealogically related languages, but also scenarios of increasing convergence through contact between unrelated or remotely related languages.

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[1] It is significant that Greenberg's (1950, 1963) treatment of Khoisan is to a large extent aimed at proving that Khoekhoe is not Afroasiatic alias "Hamito-Semitic" (Güldemann forthcoming b).

[2] Full supporting data for the starred forms is readily found in Voßen (1997) by using the lists of the register at the end of the volume. Page references are not given in this paper.

[3] The field notes are loose sheets of paper, stored in a folder without any apparent order. In order to facilitate reference to individual pieces of data, we numbered the sheets according to the arbitrary order we happened to find when receiving photocopies; both authors did this independently, and, predictably, with different results. Page references for Westphal's material are therefore only given for the more finished papers and the article, not for the field notes.

[4] To give a further possible candidate, a locative suffix *-ba* is found in both Kwadi and the Khoekhoe branch of Khoe.

[5] The abbreviations used are: Al alveolar, As aspiration, Dt dental, EG egressive, Gl glottal(ization), IG ingressive click, Lb labial, Lt lateral, Pl palatal, Vl velar.

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[6] To give just one candidate, compare Kwadi *tsau* 'old' {W2-7} with ‖Ani /*au* ~ /*eu* 'big' (Heine 1999: 39).

[7] Dahalo and some of the non-Bantu lexicon of Ma'a are included in this label; it is still open season for disputing the relation between Southern and Eastern Cushitic.

[8] We thank an anonymous reviewer for pointing out that *ki* is a locative postposition in Kxoe, yielding inter alia ǂ*amki* 'above'.

[9] The semantics parallel the use of a reflex of Bantu *-bádè 'palm tree sp., midrib of palm frond' in Herero: -*váré* 5/6 'sinew in meat'.

[10] See also (08) above.

[11] The gap probably should have been filled by a handwritten ʃ, hence *tʃhi*.

[12] Thus the conclusion to Elderkin (1998) can be turned to looking at Khoe from a Sandawe perspective, not vice-versa.