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Grammatical Relations in Ts'ixa (Kalahari Khoe)

I. Introduction

1. The Speech Community

- 150-200 speakers
- Mababe and Khwai only
- claims of ties with Shua of Pandamatenga and Danisi of Gweta, but social interaction with Khwe of Khwai only (present)
- language is used as an everyday language by most adults in Mababe, and as working language in the surrounding hunting camps
- most children attending school only have a limited command of the language

2. Genealogical Classification (cf. Güldemann, forthc.):

Kalahari Khoe

East	Tshwa:	Kua, Cua, Tsua, et al.
	Shua:	Cara, Deti, |Xaise, Danisi, et al.
	Ts'ixa	
West	Kxoe:	Khwe, ‖Ani, Buga, et al.
	G‖ana:	G‖ana, G|ui, et al.
	Naro:	Naro, Ts'ao, et al.

3. Preliminaries and Research Questions

- Ts'ixa has intransitive and transitive verbs - does it also have ditransitive verbs?
- Ts'ixa, like other Khoe languages displays accusative alignment
- Case-sensitive Person-Gender-Number (PGN) markers, postpositions, word-order and the accusative marker *ʔà* are all properties that help identifying grammatical relations in Ts'ixa
- The valency of a verb may be in- or decreased by adding derivational suffixes to the verbstem
- All participants, core and oblique, may be head of a relative clause

Further questions:

- Does Ts'ixa display properties unusual for Kalahari Khoe languages?
- Can a better understanding of grammatical relations in Ts'ixa help assessing the languages's genealogical relationship with its neighbours Shua and Kxoe?

II. Participant marking

1. Nominal gender marking in Ts'ixa

- portmanteau-morphemes encoding person, gender and number (PGN)
- form a paradigm with the language's personal pronouns (cf. table 1, PGN-markers in brackets; on the grammaticalization of articles from demonstratives and/or personal pronouns, see Himmelmann 1997, and Heine & Kilian-Hatz 1997 for a discussion on Khwe)
- Ts'ixa only has PGN-markers for the 3rd person (table 2; some Khoe-languages like Khwe sometimes mark nouns for other persons as well, cf., e.g., Khwe |ʉ́ɐ́-rà 'I, the child' (Kilian-Hatz 2008: 40))
- 2 paradigms (glossed as 'I' and 'II') marking nouns for different syntactic roles (see table 3)
- specific articles, marking nouns which are "identifiable in principle" (Himmelmann 1997: 103); generics, temporal adverbials followed by the locative/temporal postposition *ka*, place names and some NPs modified by a numeral remain unmarked
- clitics (attach to the last constituent of the NP they mark, see ex.1)

1.   **[*góè* = *dzà*   *kô*   *k'oó*] = ‖*ú*   *kô*   *àà*   *nò***
     cattle = PL.F:II   IPFV   eat.meat = PL.M:I   IPFV   come   SUB
     ʔé.sì   *kô*   *nyúḿ.*
     3SG.F.I   IPFV   whistle
     'When the cattle-eaters came, she whistled.'

Table 1: Personal pronouns and PGN-markers of Ts'ixa

			I	II
SG	I	m	*tí*	
		f	*tí*	
	II	m	*tsá*	
		f	*sá*	
	III	m	*ʔé.m̀ (= m)*	*ʔé.mà (= mà)*
		f	*ʔé.sì (= m)*	*ʔé.sà (= sà)*
		n	---	---
DU	I	m	*tsúḿ*	
		f	*súm*	
		c	*khúḿ*	
	II	m	*tsórò*	
		f	*sórò*	
		c	*khórò*	
	III	m	*ʔé.tsérà (= tsérà)*	
		f	*ʔé.sérà (= sérà)*	
		c	*ʔé.khórà (= khórà)*	
PL	I	m	‖*é*	
		f	*sé*	
		c	*tsé*	

II	m		*∥ó*	
	f		*só*	
	c		*tó*	
	III	m	*ʔé.∥ù (=∥u)*	*ʔé.∥ùà (=∥ùà)*
		f	*ʔé.dzì (=dzi)*	*ʔé.dzà (=dzà)*
		c	*ʔé.ǹ (=n)*	*ʔé.nà (=nà)*

Table 2: The PGN-markers of Ts'ixa, attached to the noun *∣ū́ã̄* 'child'

	M		F		C	
	I	**II**	**I**	**II**	**I**	**II**
SG	*∣ū́ā́=m̀*	*∣ū́ā́=mà*	*∣ū́ā́=sì*	*∣ū́ā́=sà*		
DU	*∣ū́ā́=tsérà*		*∣ū́ā́=sérà*		*∣ū́ā́=khórà*	
PL	*∣ū́ā́=∥ù*	*∣ū́ā́=∥ùà*	*∣ū́ā́=dzì*	*∣ū́ā́=dzà*	*∣ū́ā́=ǹ*	*∣ū́ā́=nà*

Table 3: Functional distribution of paradigms 'I' and 'II'

	I	II
Clause-level	• S/A (ex. 2.a-b)	• O (ex. 2.b) • appositions (e.g. the right dislocated subject in (2.c) • predicate nouns (ex. (2.d)
NP-level	• nouns headed by a postposition • possessor in possessive constructions • agreeing modifiers (adjectives, demonstratives) preceding their heads	n.a.

        S

2.a   **khoe=m**   *kô*   *ts'íì.*

       person=SG.M:I   IPFV   limp

       'The man limps.'

        A   O

2.b   **khoe=m**   *kô*   **kyxóa-k'oxú=mà**   *ʔà*   *k'oó.*

       person=SG.M:I   IPFV   elephant-meat=SG.M:II   ACC   eat.meat

       'The man eats elephant meat.'

2.c   *tsxā́ā̀*   *n∣gè*   **biyeé-∣ū̀ā̀**   *kà*   *∣úú=sà.*

       become.tired   SEQ   zebra-child   MP   one=SG.F:II

       '[It] got tired, one of the zebra young.'

2.d   *ʔé.sì*   **khoe=sà**   *ʔè.*

       3SG.F:I   person=SG.F:II   COP

       'She is a woman.'

2. Marking of oblique participants

Preliminary: Following Dixon's (1997) Basic Linguistic Theory, I will treat all participants other than S and O as oblique. In Ts'ixa, this includes all participants headed by a post-position; they may be obligatory, like the comitative argument in ex.4.b-d, or optional, like the temporal adverbials in ex.3.e & ex.5.d. Note that the accusative marker *ʔà* (see §IV) is not a postposition, as it does not act as head of the NP. Hence, it does not trigger marking by a PGN of series 'I' on the preceding noun.

ka - Multipurpose ('MP')

- tonally dependent on the preceding noun
- also marks relations within the NP, like the possessor of possessive constructions and the head of relative-like constructions
- T of ditransitive clauses:

3.a *tsá* *ʔà* *tsé* *gérè* *khaà* ***ʔyűű*** ***kâ.***
     2SG.M ACC 1PL.C FUT give food MP
     'We will give you food.'

- Instrument/Material

3.b *khoe=n* ***k'oxú*** ***ká*** *k'űĩ̀-nà-hà* ***k'áó=dzì*** ***kâ*** *gunì-nà-hà.*
     person=PL.C:I meat MP live-J-PFV.PST3 arrow=PL.F:I MP hunt-J-PFV.PST3
     'The people lived on meat and hunted with arrows.'

3.c *thìà* *í̃kâ* *k'áó=m̀* ***|ʔúĩ*** ***kà*** *hĩ̀-è-hà.*
     S.SBJ REF arrow=SG.M:I stone MP do-PASS-PFV.PST3
     'That arrow was made from stone.'

- Agent of emphatic reflexives ('by myself', etc.)

3.d ***‖xáà=m̀*** *ʔà* *ʔé.dzì* *nè* *ky'áà.xù-si* ***ná=dzì*** ***kâ.***
     morning=SG.M:I LOC 3PL.F:I SEQ take.out-REFL DEM.REF=PL.F:I MP
     'In the morning, the cows went out by themselves [were taken out by themselves].'

- Temporal adverbials

3.e. ***thúú*** ***kâ*** *tsé* *kô* *ŋóó=m̀* *ʔà* *àà* *nò* […]
      past MP 1PL.C:I IPFV place=SG.M:I LOC come SUB
      'In the past, when we used to come to the place […].'

|xòà - Comitative ('COM')

4.a *k'aro=‖ù* *nè* *kűĩ̀* ***góè=dzì*** ***|xòà.***
     boy=PL.M:I SEQ go cattle=SG.F:I COM
     'The boys went out with the cattle.'

- obligatory after the reciprocal stems *‖ʔáā̃-kù* 'fight', *‖'áé-kù* 'meet', and *xã́í-kù* 'have sex':

4.b   *thòò*   *‖ūū-xà = dzì*   *n‖gè*   *‖ʔáā̃-kù*   ***ʔé.sì***   *|xòà.*
     D.SBJ   parent-ASSOC-PL.F:I   SEQ   fight-RCPR   3PL.F:I   COM
     'The mothers (and their associates) fought with it.'

4.c   *thà*   *|úú*   *tshéè*   *síí-à*   ***biyeé = dzì***   *|xòà*   *‖'áé-kù.*
     S.SBJ   one   day   arrive-J   zebra = PL.F:I   COM   meet-RCPR
     'One day [the hyena] came to meet zebras.'

4.d   *ʔé.m̀*   *kâ*   *g‖àakhoe = si*   *kô*   ***tã́ā̃ = ‖ù***   *|xòà*   *xã́í-kù.*
     3sg.m:i   mp   wife = SG.F:I   IPFV   other = PL.M:I   COM   have.sex-RCPR
     'His wife is cheating on him (sleeping with others).'

- sometimes the reciprocal-suffix *-kù* is added to the verbstem if the speaker wishes to attach an additional argument with *|xòà*

ʔà - Generic Locative/Proximal ('LOC')

- default locative

5.a   *|ʔṹā́ = dzà*   *ʔîyè*   *ʔé.sì*   *kâ*   ***khoó = m̋***   *ʔà*   *nyáá.xù.*
     bone = PL.F:II   all   3SG.F:I   MP   skin = SG.M:I   LOC   put
     'Put all the bones on her skin!'

- may mark proximal to contrast with the ablative/distal *ŋkùà*

5.b   *tí*   *kâ*   *|ṹā́ = m̀*   ***Mabábé***   *ʔà*   *haànà.*
     1SG   MP   child = SG.M:I   GN   LOC   EXIST
     'My son is at Mababe.' (when speaker is at M. himself)

5.c   *tí*   *kâ*   *|ṹā́ = m̀*   ***Mabábé***   *ŋkùà*   *haànà.*
     1SG   MP   child = SG.M:I   GN   LOC   EXIST
     'My son is at Mababe.' (when speaker is elsewhere)

- temporal adverbials

5.d   *túú = m̀*   *túú-tã̀ā̃*   ***sáó***   *ʔà.*
     rain = SG.M:I   rain-IPFV.NEG   winter   LOC
     'It does not rain in winter.'

ŋkùà - Ablative/Distal ('LOC')

- derives from an adverbial meaning 'there' (*DEM *ŋ* + LOC *kùà*)
- Ablative:

6.a   *k'òsò*   *khoe = n*   *k'uí-nà-hà*   ***ʔé.m̀,***   *‖ʔorá = m̋*   *ŋkùà.*
     but   person = PL.C:I   speak-J-PFV.PST3   3SG.M:I   big = SG.M:I   LOC
     'But the people spoke from him, the big one (talking about a hill).'

- Distal (in contrast with *ʔà,* see (5)b-c above):

6.b ǁ*óbé tshéè* ǀ*ú.xùà* ǀ*ám̀ tshéè kare kô zeè* **káó-ò = m̀** *ŋkùà haànà = sè.*

three day sometimes two day make.biltong IPFV spend.time camp = SG.M:I LOC EXIST = ADV

'Three, sometimes two days [they] spent out in the camp, making biltong.'

ʔò - **Directive/Dative ('DIR')**

7.a *thà nè* gǁ*áî-kù* ǁ*ʔáé = m̀ ʔò.*

S.SBJ SEQ run-RCPR home = SG.M:I DIR

'[They] ran home together.'

- sometimes found contrasting with ǀ*xè* (distal reading)

7.b *tí kò nguú = ḿ* ǀ*xè kű̀ű̀.*

1SG:I IPFV house = SG.M:I toward go

'I walk towards the (visible) house.'

7.c *tí kò nguú = ḿ ʔò kű̀ű̀.*

1SG:I IPFV house = SG.M:I DIR go

'I walk to the house.'

- Dative with the verbs *khaà* 'give' and *xaroò* 'give food'

7.d *tí gérè* **sá** *ʔò khaà tsóò.*

1SG FUT 2SG.F DIR give medicine

'I will give medicine to you.'

ǀ*xè* - **Directive/Dative**

- sometimes found contrasting with *ʔò* (proximal reading, see ex.7.b-c above)
- also found meaning 'on' and 'near/next to'

8.a gǀ*ínì = sì tè xalasí = m̀* ǀ*xè* ǁ*ábu-à ngeè.*

fly = SG.F:I PRF glass = SG.M:I next.to fly-J pass

'The fly flew past the glass.' (lit. passed next to the glass in a flying manner)

8.b ǀ*ám̀ mékòrò tí mũ̄ũ̄-a-tà tshaá = ḿ* ǁ*xórò* ǀ*xè.*

two canoe 1SG:I see-J-PFV.PST1 water = SG.M:I side next.to

"I saw two canoes next to the river."

- marks human referents for general affectedness

8.c *nɪ̋ = m̀ ɪ̃̄-si-nà-tà Pitá = ḿ* ǀ*xè?*

what = SG.M:I do-REFL-J-PFV.PST1 PN = SG.M:I to

'What happened to Peter?'

8.d gǁ*óé = sì ɟúù kùè* ǁ*ʔorá = sì* ǀ*xè.*

tortoise = SG.F:I angry IPFV big = SG.F:I at

"He is angry at the big one."

III. Word order

- highly flexible (cf. table 4), pragmatically determined
- focus-slot before the subject (may be occupied by any participant)
- elements known within the discourse tend to be placed after the verb and may be dropped completely

Table 4: Word order in 4 Ts'ixa texts

	Ts'ixa (203 sentences)
SOV	98
OSV	25
SVO	80

1. Core Participants

Table 5: Pragmatic implications of word order in Ts'ixa

SOV	unmarked or S-focus
OSV	O-focus
SVO	known/topical O

SOV: unmarked and subject focus

9.a *nɪ́=m̀*   *hɪ̃̀-sì-nà-tà?*
     what = SG.M:I   do-REFL-J-PFV.PST1
     'What happened?'

9.b *maá*   *[Joseph] = mà*   *ʔà*   *‖'ám̀-nà-tà?*
     who   PN = SG.M:II   ACC   hit-J-PFV.PST1
     'Who hit Joseph?'

9.c *[Maxwell] = m̀*   *[Joseph] = mà*   *ʔà*   *‖'ám̀-nà-tà.*
     PN = SG.M:I   PN = SG.M:II   ACC   hit-J-PFV.PST1
     'MAXWELL hit Joseph." or "Maxwell hit Joseph.'

SVO: known / (potentially) topical objects

10.a *nɪ́=m̀*   *hɪ̃̀-sì-nà-tà*   *[Peter] = m̀*   *|xè?*
      what = SG.M:I   do-REFL-J-PFV.PST1   PN = SG.M:I   to
      'What happened to Peter?'

10.b *[Mary] = sì*   *‖'ám̀-nà-tà*   *ʔé.mà*   *ʔà*   *!ʔã̃́=sí*   *ʔà.*
      PN = SG.F:I   hit-J-PFV.PST1   3SG.M:II   ACC   face = SG.F:I   LOC
      'Mary hit him in the face.'

OSV: object focus

11.a *nî́=mà*   *ʔà*   *ʔé.ń*   *gérè*   *aákà?*
      WHAT=SG.M:II   ACC   3PL.C:I   FUT   bring
      'What are they going to bring?'

11.b *kyxóa-k'ōxú*   *ʔé.ń*   *gérè*   *aá.kà.*
      elephant-meat   3PL.C:I   FUT   bring
      'They will bring ELEPHANT MEAT.'

2. Oblique participants

- unmarked position: SXV as in ex.12 in answer to an unrestricted Wh-question, in particular if the oblique participant is an obligatory argument, not an adjunct (however, XSV and SVX occur as well in unmarked contexts, see below)

12.a *nî́=m̀*   *hĩ̄-sì-nà-tà?*
      what=SG.M:I   do-REFL-J-PFV.PST1
      'What happened?'

12.b *[Maxwell]=ḿ*   *[Joseph]=ḿ*   *|xòà*   *[Khwai]*   *ŋkùà*
      PN=SG.M:I   PN=SG.M:I   COM   GN   LOC
      ‖'áé-kù-nà-tà.
      meet-RCPR-J-PFV.PST1
      'Maxwell met Joseph at Khwai.'

- adverbials of location and time tend to be placed clause-initially or clause-finally

13.a *[Mababe]*   *ʔò*   *ʔé.m̀*   *kô*   *kűũ̀.*
      GN   DIR   3SG.M   IPFV   go
      'He goes to Mababe.'

13.b *ʔé.m̀*   *kűũ̀-à-ʔò*   *[Khwai]*   *ʔò.*
      3SG.M:I   go-J-PFV.PST2   GN   DIR
      'He went to Khwai.'

13.c *[Sunday]*   *kâ*   *ʔé.m̀*   *sĩ̀-tè-nà-hà.*
      Sunday   MP   3SG.M:I   work-ITER-J-PFV.PST3
      'He often worked on Sunday.'

13.d *tsé*   *ky'óá-hà*   *tshéè*   *ʔîyè.*
      1PL.C   go.out:J-PFV.PST3   day   all
      'We went out every/all day.'

- if a clause occurs with both an adverbial of location and an adverbial of time, the adverbial of location tends to be placed clause-initially, while the adverbial of time is placed clause-finally (14.a); however, exceptions to this tendency are not uncommon (ex.14.b)

14.a *[Khwai]* *ʔò* *ʔé.m̀* *kű̀ű̀-à-hà* *ʔú.kâ.kâ.tshéè*
GN   DIR   3SG.M:I   go-J-PFV.PST3   yesterday
'Yesterday he went to Khwai.'

14.b *ʔé.m̀* *kű̀ű̀-à-hà* *[Khwai]* *ʔò* *ʔú.kâ.kâ.tshéè*
3SG.M:I   go-J-PFV.PST3   GN   DIR   yesterday
'Yesterday he went to Khwai.'

- oblique participants may be focused:

15.a *maá* *|xòà* *sà* *‖'áé-kù-nà-tà* *[Khwai]* *ŋkùà?*
who   COM   2SG.F   meet-RCPR-J-PFV.PST1   GN   LOC
'Whom did you meet at Khwai?'

15.b *[Joseph]=m̋* *|xòà* *tí* *‖'áé-kù-nà-tà.*
PN=SG.M:I   COM   1SG   meet-RCPR-J-PFV.PST1
'I met JOSEPH.'

15.c *Maáxùà* *sá* *ʔé.m̋* *|xòà* *‖'áé-kù-nà-tà?*
where   2SG.F:I   3SG.M:I   COM   meet-RCPR-J-PFV.PST1
'Where did you meet him?'

15.d *[Khwai]* *ŋkùà* *tí* *ʔé.m̋* *|xòà* *‖'áé-kù-nà-tà.*
GN   LOC   1SG   3SG.M:I   COM   meet-RCPR-J-PFV.PST1
'I met him AT KHWAI.'

- The unmarked position of oblique participants (other than adverbials of location and time) in transitive clauses is hard to determine, as it varies even in elicitation contexts making use of unrestricted Wh-questions. The same accounts for the arguments of semantically ditransitive predicates (ex.16)

16.a *nî̋=mà* *ʔà* *tsá* *hì̋ì̀-à-tà?*
what=SG.M:II   ACC   2SG.M   do-J-PFV.PST1
'What did you do?'

Recipient (=O)   Theme (=OBL)   S   V
16.b *Polítíkí=mà* *ʔà* *|ʔáò* *kâ* *tí* *khaà-nà-tà.*
PN=SG.M:II   ACC   money   MP   1SG   give-J-PFV.PST1
'I gave money to Politics.'

Recipient (=OBL)   S   Theme (=O)   V
16.c *tí* *kâ* *taxù=sì* *ʔò* *tí* *|ʔáò* *ʔà* *khaà-nà-tà.*
1SG   MP   sibling.e=SG.F:I   LOC   1SG   money   ACC   give-J-PFV.PST1
'I gave money to my elder sister.'

(Situation: You went to town and come back with a dress for your sister, which you are now showing to me.)

	Theme (= OBL)				Recipient (= O)			S
16.d	*kuú* = *m̋*	*meé* = *m̀*	*kâ*	*tí*	*kâ*	*kű̃ĩk'èè* = *sà*	*ʔà*	*tí*
	dress = SG.M:I	DEM.DIST = SG.M:I	MP	1SG	POSS	sister = SG.F:II	ACC	1SG

kyű̃ĩ-a-ma-nà-tà.
buy-J-BEN-J-PFV.PST1
'I bought that dress for my sister.'

In 14 instances of the sentence 'I gave money to Politics' as answer to an unrestricted Wh-question, recorded with 4 speakers, 9 displayed the word order **Recipient-Theme-Subject-Verb**, no matter whether Recipient, Theme or both were encoded as oblique.

IV. The accusative marker *ʔà*

- Obligatory for pronominal and PGN-marked objects in SOV and SVO; in SOV, the glottal stop is sometimes omitted, but the accusative marker is clearly perceivable in the lengthening of the final vowel *-à* of the PGN-marker

17.a *[Blesswell]* = *m̀* *kô* *bukà* = *sà* *(ʔ)à* *bálà* = *rè?*
PN = SG.M:I   IPFV   book = SG.F:II   ACC   read = Q
'Is Blesswell reading the book?'

17.b *[Mary]* = *sì* *bálà-nà-tà* *bukà* = *sà* *ʔà.*
PN = SG.F:I   read-J-PFV.PST1 book = SG.F:II   ACC
'Mary read the book'

- Optional in OSV → contrastive reading

18.a *maá* *ʔà* *tsá* *‖'ám̀-nà-tà?*
who   ACC   2SG.M   beat-J-PFV.PST1
'Whom did you beat?'

18.b *k'aro* = *mà* *tí* *‖'ám̀-nà-tà?*
boy = SG.M:II   1SG   beat-J-PFV.PST1
'I beat the boy.'

18.c *ʔabá* = *mà* *tsá* *‖'ám̀-nà-tà?*
dog = SG.M:II   2SG.M   beat-J-PFV.PST1
'Did you beat the dog?'

18.d *ʔĩ̃,* *ʔabá* = *mà* *tí* *‖'ám̀-nà-tà* *ʔíté,* *k'aro* = *mà* *ʔà* *tí* *‖'ám̀-nà-tà.*
no dog = SG.M:II 1SG beat-J-PFV.PST1 NEG boy = SG.M:II ACC 1SG beat-J-PFV.PST1
'No, I did not beat the dog, I beat the boy.'

- Unmarked nouns obligatorily receive *ʔà* if they correspond to the feature [+ human]

19. | *G\|óóxà=ḿ* | *ŋkùà* | *\|úxùà* | *tsá* | *kô* | *khoe* | *ʔà* | *kúḿ* | *k'uí* | *kó=sè.* |
| GN=SG.M:I | LOC | sometimes | 2SG.M | IPFV | person | ACC | hear | speak | IPFV=ADV |

   'At G|oxa-Hill, you can sometimes hear people speaking.'

- otherwise, *ʔà*-marking on [-human] referents not marked by a PGN-marker always leads to a contrastive reading ('X and not something else'):

20.a | *!xaò* | *kô* | *ʔabá* | *péè.* |
| hippo | IPFV | dog | chase |

   'A hippo is chasing a dog.'

20.b | *!xaò* | *kô* | *ʔabá* | *ʔà* | *péè.* |
| hippo | IPFV | dog | ACC | chase |

   'A hippo is chasing a dog (and not something else).'

→ *ʔà*-marking relates to the topic-potential of O (compare, e.g., Iemmolo 2010, Dalrymple & Nikolaeva 2011); compare also the quite similar behaviour of the topic marker *wa* in Japanese (Kuno 1972)

V. Valency Changing Operations

1. Reducing Valency

1.1. The (agentless) Passive

- passive suffix *-i* ~ *-e* + a particle *ʔè* which is obligatory with all non-perfective TAM markers

21.a | *sexáí* | *\|úí* | *kâ* | *kô* | *\|'ṹű-é* | *ʔè.* |
| spear | only | INST | IPFV | kill-PASS | PASS |

   '[It] (the steenbok) is killed with only a spear.'

21.b | *ʔé.dzì* | *xú=dzí* | *ná=dzì* | *kô* | *n\|góá-è* | *ʔè.* |
| 3PL.F:I | thing=PL.F:I | DEM.REF=3PL.F:I | IPFV | cook-PASS | PASS |

   'Those things are cooked.'

21.c | *ʔyúḿ-\|ʔérè* | *kô* | *!huú-í* | *ʔè* | *nyaá-í* | *ʔè.* |
| baobab-rope | IPFV | flay-PASS | PASS | twist-PASS | PASS |

   'Baobab-rope is flayed (from the tree) and twisted.'

- with the perfective/anterior-suffixes, the passive suffix replaces the juncture
- patient of a transitive clause appears as S
- no agent may be added (compare Kxoe, cf. Kilian-Hatz 2008: 151, and Nama, cf. Hagman 1977: 81); addition of an agent appears to be possible in other Kalahari Khoe languages, e.g. in Shua and G|ui (Hirosi Nakagawa, p.c.)

22.a *[Maxwell]=m̀*   *kyxoà=mà*   *ʔà*   *‖áó-nà-tà.*
    PN = SG.M:I   elephant = SG.M:II   ACC   shoot-J-PFV.PST1
    'Maxwell shot the elephant.'

22.b *kyxoà=m̀*   *‖áó-é-tà.*
    elephant = SG.M:I shoot-PASS-PFV.PST1
    'The elephant was shot.'

    * *kyxoà=m̀*   *‖áó-é-tà*   *[Maxwell]=m̀*   *kâ.*
    Attempted: 'The elephant was shot by Maxwell.'

- Only the theme of the verb *khaà* 'give' may be S of a passive construction, not the recipient; more research will be needed to determine whether this holds true for other semantically ditransitive verbs as well

23.a *tí*   *ʔò*   *k'oxú=mà*   *ʔà*   *[Maxwell]=m̀* *khaà-nà-tà.*
    1SG   DIR   meat = SG.F:II   ACC   PN = SG.M:I   give-J-PFV.PST1
    'Maxwell gave the meat to me.'

23.b *k'oxú=ḿ*   *tí*   *ʔò*   *khaà-è-tà.*
    meat = SG.M:I   1SG   DIR   give-PASS-PFV.PST1
    'The meat was given to me.'

    **tí*   *k'oxú=ḿ*   *kâ*   *khaà-è-tà.*
    Attempted: 'I was given the meat'

- Sometimes used with intransitive motion verbs (compare Khwe, cf. Kilian-Hatz 2008: 151-2)

24. *[Maun]* *ʔò*   *kô*   *kṹ̀ũ̀-è*   *ʔè*   *dzirí.tshaú*   *ká.*
    GN   DIR   IPFV   go-PASS   PASS   Friday   MP
    'One may go to Maun on Friday.'

- reconstructed as *-he for Proto-Khoe and Proto-Khoekhoe, *-e for Proto-Kalahari Khoe (cf. Vossen 1997: 360)

1.2 The Reflexive/Anticausative

- Reflexive: agent and patient are not differentiated

25.a *tí*   *kô*   *mũ̀ũ̀-sí.*
    1SG:I   IPFV   see-REFL
    'I see myself (in the mirror).

25.b *‖ú́ấ=m̀*   *sámbà-sí-nà-tà.*
    child = SG.M:I   wash-REFL-J-PFV.PST1
    'The boy washed himself.'

- Anticausative: S corresponds to O of the underlying transitive, A is neither stated nor implied

26.a *ní̋=mà*   *tsá*   *kô*   *hṻ̀?*
     what=SG.M:II   2SG.M   IPFV   do
     'What are you doing?'

26.b *ní̋=m̀*   *kô*   *hṻ̀-sì?*
     what=SG.M:I   IPFV   do-REFL
     'What is happening?'

- developing into a passive marker with inanimate nouns; it is not entirely clear to which extend this construction differs from "ordinary" passives with *-i ~ -e* (+ *ʔè*)

27.a *sí̋í=m̀*   *hṻ̀-sí-nà-tà*   *(ʔè.)*
     work=SG.M:I   do-REFL-J-PFV.PST1   (PASS)
     'The work was done.'

27.b *sí̋í=m̀*   *hṻ̀-é-tà*   *(ʔè.)*
     work=SG.M:I   do-PASS-PFV.PST1   (PASS)
     'The work was done.'

- in Khwe, passives formed with the reflexive marker *-can* allow for the addition of an agent; this is not the case in Ts'ixa

2. Increasing Valency

2.1. Causative

- three productive causative suffixes: *-kà*, *-káxù* and *-xù*
- causatives of intransitive verbs:

28.a *sí̋í=m̀*   *khudí-ná-tá.*
     work=SG.M:I   end-J-PFV.PST1
     'The work is finished.'

28.b *tí*   *sí̋í=mà*   *ʔà*   *khudi-káxù-nà-tà.*
     1SG   work=SG.M:II   ACC   end-CAUS-J-PFV.PST1
     'I finished the work.'

28.c *|ʔeé=sí*   *kô*   *dàò*
     fire=SG.F:I   IPFV   burn
     'The fire is burning.'

28.d *tí*   *kô*   *|'urí=mà*   *ʔà*   *dàò-xù.*
     1SG   IPFV   litter=SG.M:II   ACC   burn-CAUS
     'I am burning the litter.'

- Causatives of transitive verbs:

29.a   *khoe=n*   *kô*   *ts'íxà-dam̀*   *ʔã́ã́.*

      person=PL.C:I   IPFV   T.-tongue   get.to.know

      'The people learn Ts'ixa.'

(causee is omitted, original O retains its status)

29.b   *ti*   *kô*   *ts'íxà-dam̀*   *ʔã́ã́-kà.*

      1SG   IPFV   T.-tongue   get.to.know-CAUS

      'I teach Ts'ixa.'

(causee acts as O, original O is added in a complement clause)

29.c   *tí*   *kô*   *Djéménì*   *ʔò*   *kṹ̀ũ̀*   *nò*   *tí*   *gérè*   *khoe=nà*   *ʔà*   *ʔã́ã́-káxù*

      1SG   IPFV   Germany   LOC   go   SUB   1SG   FUT   person=PL.C:II   ACC   get.to.know-CAUS

      maá.thà   *ti*   *kâ*   *k'uí=sí*   *kô*   *k'uì-è*   *tà.*

      how   1SG   POSS   speak=SG.F:I   IPFV   speak-PASS   COMP

      'When I go to Germany I will teach people how to speak my language.'

→ More research will be needed to determine whether the causative of a transitive verb may result in a double object construction in which causee and original O are treated the same

- reduplication is a productive strategy to derive causatives

30.a   *xalásí=sì*   *|'óè-hà.*

      glass=SG.F:I   become.full:J-PFV.PST3.

      'The glass is full.'

30.b   *tí*   *kô*   *xalásí=sà*   *ʔà*   *|'óè.|'óè*

      1SG   IPFV   glass=SG.F:II   ACC   become.full:CAUS

      'I fill the glass.'

2.2. Benefactive: introducing a beneficiary

- the suffix *-ma* derives from a verb *-ma 'to give' (cf. Vossen 1997: 351), which is still productive in some Kalahari Khoe languages (e.g., Tshwao, G|ui). The source for this derivation is a multiverb construction with *-ma* as V2; it is therefore linked to the verbstem by the juncture morpheme
- the beneficiary is treated as O, the theme is encoded as oblique by the multipurpose postposition *ka*

31.   *ʔé.mà*   *ʔà*   *tí*   *gyírà-nà-ta*   *ʔe.m̀*   *tí*   *ʔà*   *k'oxú*   *ká*   *ǂṹ̀ũ-a-ma*   *tà.*

      3SG.M:II   ACC   1SG   ask-J-PFV.PST1   3SG.M:I   1SG   ACC   meat   INST   buy-J-BEN   COMP

      'I asked him to buy meat for me.'

VI. Relative

- the multi-purpose postposition *ka* also acts as relative marker
- it follows the head of the relative clause which may not receive a PGN-marker
- the PGN is placed at the end of the relative clause

32.a *tsóòkhóè   kâ   Khwâì   ʔà   kô   nyűű=m̀   ʔÒmékà   ŋkùà*
   healer   MP   GN   LOC   IPFV   stay=SG.M:I   GN   LOC

   kô   ky'óá.
   IPFV   come.from
   'The healer who lives at Khwai comes from Omega.'

32.b *kúú   ká   sá   ʔá̋ã-sí-nà-hà=m̀   t'ű̃̀   ʔè.*
   dress   MP   2SG.F   dress-REFL-J-PFV.PST3=SG.M:II   beautiful   COP
   'The dress you wear is beautiful.'

- the head of the relative clause may be postposed

33. *g‖óé=sì   mũ̃ũ-tã̀ã̀   aqám̀=sí   kô   hṹ̃=sà   ʔà   xúù   kà.*
   tortoise=SG.F:I   see-IPFV.NEG   toad=SG.F:I   IPFV   do=SG.F:II   ACC   thing   MP
   'The tortoise does not see the thing the toad is doing.'

- relative clauses without *ka* are possible if the relative clause is headed by its S or O

34.a *sá   tè   mũ̃ũ̀-rè   xám̀=dzì   meé=dzì   dáò=mà   ʔà   tè*
   2SG.F:I   PRF   see-Q   lion=PL.F:I   DEM.DIST=PL.F:I   way=SG.M:II   ACC   PRF

   pérè-ʔò=dzà   ʔà.
   jump-LOC=PL.F:II   ACC
   'Did you see that lion which crossed the way?'

34.b *sá   tè   mũ̃ũ̀-rè   khoe=mà   ʔà   tí   ‖'ám̀-à-ʔò=mà   ʔà*
   2SG.F:I   PRF   see-Q   man=SG.M:II   ACC   1SG   hit-J-PFV.PST2=SG.M:II   ACC
   'Did you see the man whom I hit?'

- oblique participants may act as head of a relative clause; they are referenced in the relative clause by the referential pronoun *ʔí̋*

35. *aákà   tóbóló   kâ   ʔí̋   kâ   tí   gérè   ‖ʔáó=sà   ʔà   xám̀=sà   ʔà.*
   bring   gun   MP   REF   MP   1SG   FUT   shoot=SG.F:II   ACC   lion=SG.F:II   ACC
   'Bring the gun with which I will shoot the lion.'

- all participants of a semantically ditransitive clause may act as head of a relative clause; recipient and theme may both be treated like O, but not at the same time, meaning either recipient or theme will be treated as oblique and be referenced accordingly

36.a *|ʔáò   kà   Polítíkí=m̀   ʔò   tí   khaà-nà-tà=mà*
   money   MP   PN=SG.M:I   DIR   1sg   give-J-PFV.PST1=SG.M:II
   'The money which I gave to Politics.'

36.b *khoe   kâ |ʔáò=m̀   kâ   tí   khaà-nà-tà=mà*
   money   MP   money=SG.M:I   MP   1sg   give-J-PFV.PST1=SG.M:II
   'The man whom I gave the money to.'

36.c *khoe   kâ   tí |ʔáò=mà   ʔà   ʔí̋   ʔò   khaà-nà-tà=mà*
     man   MP   1SG   money=SG.M:II   ACC   REF   DIR   give-J-PFV-PST1=SG.M:II
     'The man whom I gave the money to.'

- The beneficiary of a benefactive construction is treated like a normal O:

37.   *tsá   ʔaná-hà-rè   ʔé.sì   kâ   k'áàkhóè=mà   ʔà   ʔé.sì   kô*
     2SG.M   know:J-PFV.PST3-Q   3SG.F:I   MP   husband=SG.M:II   ACC   3SG.F:I   IPFV
     ʔyű̋ű̋=sì   kà   n|góà-ø-mà=mà   ʔà.
     food=SG.F:I   MP   cook-J-BEN=SG.M.II   ACC
     'Do you know her husband whom she is cooking the food for?'

- if the relative clause is headed by the theme, a benefactive construction with *-ma* is no longer possible, and the beneficiary has to be introduced by the dative postposition *|xè:*

38.   *tsá   ʔaná-hà-rè   ʔyű̋ű̋   kâ   ʔé.sì   kâ   k'áàkhóè=m̀ |xè   ʔé.sì   kô*
     2SG.M   know:J-PFV.PST3-Q   food   MP   3SG.F:I   MP   husband=SG.M:I   DAT   3SG.F:I   IPFV
     n|góà=sà   ʔà.
     cook=SG.F.II   ACC
     'Do you know the food she is cooking for her husband?'

VII. Summary

Table 6: PGN-marked ([+specific]) core participants in Ts'ixa (accusative alignment)

	PGN	Postposition	ACC ʔà
S	'I'	-	-
A	'I'	-	-
O	'II'	-	obligatory in SOV and SVO; optional in OSV

→ word order only acts as identifier for grammatical relations with non-PGN-marked ([-specific]) nouns; if none of them is marked by the accusative-topic marker *ʔà*, we are dealing with neutral alignment, i.e., S, A and O are treated the same e.g., ex.20.a

Table 7: Possible marking for participants of semantically ditransitive verbs (secundative or indirective alignment)

	PGN	Postposition	ACC ʔà
S	'I'	-	-
A	'I'	-	-
O	'II'	-	obligatory in SOV and SVO; optional in OSV
Recipient/Beneficiary	'I'	ʔò 'DIR'	-
	'II'	-	obligatory in SOV and SVO; optional in OSV
Theme	'I'	ka 'MP'	-
	'II'	-	obligatory in SOV and SVO; optional in OSV

Note that Recipient/Beneficiary and Theme cannot simultaneously be treated like O; hence, double object constructions are not possible (they feature in the data of one speaker, but were rejected by all others)

So does Ts'ixa have ditransitive verbs?

- **Kittilä (2006):** ditransitives are verbs with two arguments coded like the patient of a monotransitive verb (O)
- **Malchukov et al. (2010):** a ditransitive construction has an agent (A), a recipient argument (R) and a theme argument (T) - all should be part of the valency frame of the verb
- **König & Heine (2010):** there are no ditransitives in Ju (Kx'a), as a verb of this language can have no more than two arguments; additional participants - no matter whether R or T - are treated as adjuncts

→ I suggest that Ts'ixa aligns with Ju in having **no real ditransitives**. Either R or T have to be encoded as oblique, whereas - despite of obvious preferences, especially with the verb *khaà* - it is left to the speaker whether he wants to encode R or T as oblique (ex.16.b-c)

VIII. Grammatical relations in Ts'ixa from a genealogical and areal perspective

1. PGN-marking

- the PGN-system has been reconstructed for proto-Khoe by Vossen (1997: 349)
- he considers the paradigm ending in *-a* (paradigm 'II', the accusative paradigm in Ts'ixa) as the more basic one; this is rejected by Güldemann (2004)
- all Kalahari Khoe languages have at least two paradigms of PGN-markers, the one ending in *-a* and the one ending in *-i* or zero
- Shua, like other Eastern Kalahari Khoe languages, only marks few selected nouns (personal names) for grammatical gender; here, the two paradigms are only visible in the language's personal pronouns. Following Himmelmann (1997) and the scenario Heine & Kilian-Hatz (1997) suggest for Kxoe, the personal pronouns in Shua have not grammaticalized into articles (like in Ts'ixa and Kxoe) and eventually noun markers (like in Naro and Khoekhoe); I therefore assume, following Güldemann (2004, p.c.) that the lack of nominal gender marking in Shua is not the result of loss (as suggested by Vossen 1997)
- Shua and Kxoe both show a clear distinction between PGN-markers that mark arguments of the clause ('II') and arguments marking nominal dependents ('I'), cf. table 8
- the Kalahari Khoe language G|ui (cf. table 9) has three paradigms: nominative, accusative, and genitive (Nakagawa 1993)

Table 8: Functions of paradigms 'I' and 'II' in Shua, Khwe, and Ts'ixa

Shua I	Shua II (-a)	Khwe I	Khwe II (-a)	Ts'ixa I	Ts'ixa II (-a)
• S in subordinate and embedded clauses • before a postposition other than the accusative *ʔà* • possessor in possessive constructions	• S, O, IO in main clauses • predicate nouns	• before a postposition • possessor in possessive • constructions	• S, O, IO • predicate nouns	• S • before a postposition other than the accusative *ʔà* • possessor in possessive constructions	• O • right dis-located S • predicate nouns

Table 9: Case-sensitive PGN-markers in G|ui (adapted from Nakagawa 1993)

		Nominative	Accusative	Genitive
SG	m	**-bì**	-mà	**-m̀**
	f	-sì	-sà	-sì
DU	m	-tsèra	-tsèra	-tsèra
	f	-sèra	-sèra	-sèra
	c	-khòra	-khòra	-khòra
PL	m	-‖ù	-‖òa	-‖ù
	f	-zì	-zì	-zì
	c	**-rì**	-nà	**-ǹ**

→ Nominative and Genitive paradigm are almost identical (exeptions SG.M and DU.C)

- Functionally, Nakagawa's "genitive" paradigm corresponds to paradigm 'I' in Khwe and Shua; his "accusative" paradigm corresponds to paradigm 'II' in Ts'ixa

- Ts'ixa displays the same case-distinction as G|ui, though the functions of Nakagawa's "genitive" and "nominative" are carried out by one and the same paradigm (formally corresponding to Nakagawa's "nominative")

Table 10: Functional properties of PGN-marking in Ts'ixa, compared to Shua, Kxoe and G|ui (cf. Nakagawa 1993, 2013, p.c.)

	Shua	Kxoe	G|ui	Ts'ixa
PGN-markers as specific articles or noun markers	n	y	y	y
accusative alignment of PGN-paradigms	n	n	y	y
distinction independent - dependent nouns	y	y	y	n

Note: Formally, the paradigms of Ts'ixa correspond to Shua and G|ui, but not to Kxoe

2. Ditransitive verbs

- Ts'ixa has no ditransitive verbs in the strictest sense, i.e., no double object constructions are possible (cf. Kittilä 2006)
- Ts'ixa does not even appear to have ditransitive verbs in the narrower sense, as at least one participant - recipient/beneficiary OR theme - has to be encoded as oblique; which one is left to the speaker and displays considerable variation in my data
- Other Khoe language do have "real" ditransitives, i.e., verbs allowing for double object constructions (e.g., Khoekhoe, Hagman 1977; Kxoe, Kilian-Hatz 2008; G|ui, Nakagawa, p.c.; Shua, my data; Tshwao, Jeffrey Wills, p.c.)
- In Namibian Khwe, both recipient and theme may be marked by the object marker *ʔà* (39.a), no referent is marked (39.b), or only the recipient is marked (ex. 39.c). There is no example in which any participant would be marked by the instrument postposition *ka* or any other postposition, such as the dative/benefactive.

39.a *Màtìaci-m̀ à |'áò à tí xàró-á-tà.*
     Matthew-3SG.M ACC money ACC 1SG give-J-PST2
     'I gave money to Matthew.' (Kilian-Hatz 2008: 63)

39.b *Á |'é-hὲ xà-má áta ‖hùáxu-i-hã nò.*
     DEM fire-3SG.F DEM-3SG.M thus take.away-PASS-PST1 CONJ
     'One (of us) has taken that fire away from him.' (Kilian-Hatz 2008: 63)

39.c *Tíyò n|ı̃̀kà tí yà-à-tá nò, tcá tí-è kwέε xó vé!*
     then there 1SG come-J-PST2 CONJ 2SG.M 1SG-ACC refuse thing NEG
     'You can't refuse this to me, when I come here.' (Kilian-Hatz 2008: 63)

- Shua appears to follow a similar pattern, whereas my data has yielded no example in which both O and IO were marked. In (40.a) and (40.b), all participants go unmarked, whereas in (40.c), the IO is marked by *ʔà*.

40.a *taá ʔé.mà ʔà djàrà-Ø-hà xòrè ʔé.m̀ táà k'òhú ‖ʔãĩ-à-mà.*
     1SG 3SG.M:II ACC ask.for-J-PERF COMP 3SG.M:I 1SG meat buy-J-BEN
     'I asked him to buy meat for me.'

40.b *tsám ke hı̀̃.à tca ʔyűű khaà.*
     1DU.M IPFV FUT 2SG.M food give
     'We will give you food.'

40.c *aa-na taa-ʔa tshao khaa.*
     come-CONJ 1SG-ACC hand give
     'Come and give me a hand.'

- ‖Ani, a dialect of Kxoe, marks the theme of a beneficiary-construction derived with the suffix *-ma* with the postposition *ka* (note that ‖Ani cross-references 'my child', but not 'food' on the verb):

41. *tí*   *ǀù*   *ǀúá̰=hɛ̀*   *tí*   *ǂūū-á-mà-sì-tè*   *ǂʔúú*   *kà.*
     1SG   POSS   child=SG.F:II   1SG   buy-J-BEN-SG.F-PRS   food   OBL
     'I buy food for my child.'

- As has already been noted (cf. König & Heine 2010), ditransitive verbs are absent in the Kx'a family where either recipient/beneficiary or theme is marked with a pre-verbal oblique marker kV (42.a-b):

42.a *Dà'ámá*   *jàn*   *ǀ'àn*   *ha*   *bá*   **kò**   **màrì.**
     child   good   give   N1/2   father   part   money
     'The good child gave his father money.' [Juǀ'hoan (Dickens 2005:40)]

42.b *ārī*   *ǁà'í*   *yā*   *gǀōò*   *āqrī zàà̰n*   **kì**   **dzòò.**
     woman   PROG   give   man   OBL   **water**
     'The woman gives the man water.' [N!aqriaxe (Berthold, p.c.)]

→ With respect to ditransitive constructions, Ts'ixa does not show the same patterns as other languages of the Khoe family, though more data from ‖Ani might display some similarities. Considering the wide functional range of an apposition *ka* as both an oblique marker and a marker of dependency relations in the NP, influence from a non-Khoe language may be considered.

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Abbreviations

I	gender-number series I
II	gender-number series II
1	1st person
2	2nd person
3	3rd person
A	agent
ACC	accusative
ADV	adverbial
ASSOC	associative
BEN	benefactive
C	common gender
CAUS	causative
COM	comitative
COMP	complementizer
COMPL	completive
CONJ	conjunction
COP	copula
D	different
DEM	demonstrative
DIM	diminuitive
DIR	directive
DIST	distal
DU	dual
EMPH	emphatic
EXIST	existential
F	feminine
FUT	future (posterior)
GN	geographical name
ID	identifcation marker
IPFV	imperfective
ITER	iterative
J	juncture
LOC	locative
M	masculine
MP	multi-purpose
NEG	negation
O	object
OBL	oblique
PASS	passive (agentless)
PFV	perfective
PERF	perfect
PN	personal name
POSS	possessive
PROG	progressive
PST1	same day past (anterior)
PST2	recent past (anterior)
PST3	remote/general past (anterior)
PL	plural
Q	question
RCPR	reciprocal
REF	referential
REFL	reflexive
SBJ	subject
SEQ	sequential
SG	singular
SUB	subordination marker
TOP	topic