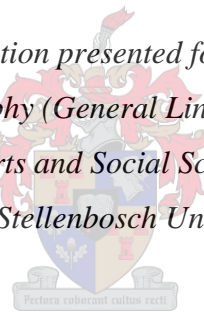


The Verbal and Nominal Morpho-syntax of Tjwao: A Grammaticalisation Approach.

by

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“Every two weeks another language disappears forever! Once a language is lost, humanity loses a part of our rich heritage. Helping to preserve endangered languages is important to keep traditions alive” (Robert Alan Silverstein)¹

¹ <https://www.doonething.org/heroes/pages-a/alan-quotes.htm>., accessed on 19/02/2021.

Declaration

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Abstract

The present study examines nominal and verbal morphosyntax in Tjwao – a moribund and highly under-researched Khoe-Kwadi language spoken by seven individuals in Tsholotsho District and some parts of Plumtree District in western Zimbabwe, near the Botswana border. The study employed the qualitative research approach characterised by the collection of main evidence by means of interviews, elicitation, focus group discussions and participant observation. Additional evidence was drawn from the small Tjwao corpus previously collected by Living Tongues Institute for Endangered Languages (USA) in collaboration with the African Languages Research Institute (University of Zimbabwe). The collected synchronic evidence on Tjwao phonetics and phonology, nominal morphosyntax and the verbal system is described following the Basic Linguistic Theory approach. Drawing on Grammaticalisation Theory, the author describes the development of different functional categories and show that grammatical morphemes in Tjwao have historically developed from lexical sources. To render further support to findings made in Tjwao, the study draws on additional evidence from other languages of the Kalahari Khoe branch, that is, the closely related Tshwa dialects, Cirecire, Glabak'e, Hiechware and Kua, as well as languages from other clusters like Danisi (Shua), Ts'ixa, Khwe, lAni, Kua-Glana, Glui and Naro. In addition, this work considers data from unrelated language families worldwide. The findings of the study suggest that Tjwao conforms to the grammaticalisation tendencies exhibited by both related Kalahari Khoe languages and also observed on a cross-linguistic scale.

Ingqikithi Yocwaningo (IsiZulu)

Ucwaningo lwamanje luhlola ukwakheka kwamagama nemisho ngokwezingcezu olimini lwesiTjwao – ulimi lwesiKhoe-Kwadi olufayo nokungakacwaningwa kakhulu ngalo olukhulunywa ngabantu abayisikhombisa esifundeni saseTsholotsho nakwezinye izingxenye zesifunda sasePlumtree entshonalanga neZimbabwe, eduze komngcele waseBotswana. Lolu cwaningo lusebenzise indlela yokucwaninga eqoqa ulwazi olungamaqiniso ngokuhlenganisa ubufakazi obuqavile kusetshenziswa izingxoxompendulwano, ukunxena, ukuxoxisana namaqoqo kanye nokubheka ukwenza kwababambiqhaza. Obunye ubufakazi buqoqwe emibhalweni emibalwa yesiTjwao eyayiqoqwe kudala yisikhungo iLiving Tongues Institute for Endangered Languages (sase-USA) ngokubambisana nesikhungo se-African Languages Research Institute (seNyuvesi yaseZimbabwe). Ubufakazi obuqoqiwe obuphathelene nokubhaleka kanye nemisindo yesiTjwao, ukwakheka kwamagama nemisho ngokwezingcezu kuchazwa ngokulandela indlela yoMbono Wenjulalwazi Emaqondana Nokuyizisekelo Kwezolimi. Ngokucaphuna kuMbono Wenjulalwazi Yezokuqonda Kolimi, umbhali uchaza ukushintsha kwezigaba ezahlukahlukene zokusetshenziswa aphinde akhombise ukuthi izakhi zolimi oluqondile lwesiTjwao zisungulwe emithonjweni yamagama atholakala olimini ngokomlando. Ukusekela kabanzi lokho okutholakele maqondana nesiTjwao, lolu cwaningo lusebenzise obunye ubufakazi obuvela kwezinye izilimi zegatsha lwesiKhoe SaseKalahari, okusho izilimi zezigodi ezihlobene kakhulu nesiTshwa, isiCirecire, isiGlabak'e, isiHiechware nesiKua, kanye nezilimi ezivela kwamanye amaqoqo afana nesiDanisi (isiShua), isiTs'ixa, isiKhwe, isi-!Ani, isiKua-Glana, isiGlui nesiNaro. Phezu kwalokho, lo msebenzi ubheka neminingo evela ezinhlotsheni zezilimi ezingahlobene zomhlaba wonke. Okutholakale ocwaningweni kuphakamisa ukuthi isiTjwao sihambisana nezinqubo zokuqondiswa kolimi ezibonakala ezilimini ezihlobene nesiKhoe SaseKalahari kanti futhi ziyabonakala nasezinhlobeni zezilimi ezahlukahlukene.

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Dedication

In loving memory of my late mother, father, and grandfather, who are absent to see the blessings that the Lord has showered upon them.

Table of Contents

Abstract	iv
Ingqikithi Yocwaningo (IsiZulu)	v
Acknowledgements	vi
Dedication	viii
List of Figures	xiii
List of Tables	xiii
List of Maps	xiii
Abbreviations	xiv
CHAPTER ONE: INTRODUCTION	1
1.1 Language Classification	1
1.2 A Brief History of the Tjwa People and their Language.....	4
1.2.1 Who are the Tjwa People?.....	4
1.2.2 Their Life before Colonisation	6
1.2.3 Colonial Era: 1890-1980	9
1.2.4 Post-colonial Era: 1980 to 2010	11
1.2.5 Current Socio-linguistic Status	14
1.3 The Present Study.....	16
1.3.1 Problem Statement, Research Question and Objectives.....	17
1.3.2 Ethical Considerations	18
1.4 The Structure of the Thesis	18
CHAPTER TWO: LITERATURE REVIEW	20
2.1 The Khoe Language Family	20
2.2 Khoekhoe	24
2.3 Kalahari Khoe Branch.....	26
2.3.1 <i>Western Kalahari Khoe</i>	26
2.3.2 <i>Eastern Kalahari Khoe</i>	28
2.4 Review of Grammaticalisation in Kalahari Khoe	30
CHAPTER THREE: RESEARCH METHODOLOGY AND THEORETICAL FRAMEWORK	34
3.1 Research Methodology.....	34
3.1.1 Qualitative Research.....	34
3.1.2 Fieldwork.....	35
3.1.3 Selection of Participants	35
3.1.4 Recording Data	38

3.1.5 Data Collection Techniques.....	39
3.2 Theoretical Frameworks.....	43
3.2.1 Basic Linguistic Theory.....	43
3.2.2 Grammaticalisation Theory	45
CHAPTER FOUR: SOUND SYSTEM OF TJWAO.....	49
4.1 Orthographic Conventions.....	49
4.1.1 Vowel Orthographic Representations.....	49
4.1.2 Consonant Orthographic Representations	50
4.2 Phoneme Inventory	53
4.2.1 Tjwao Vowel System.....	53
4.2.2 Consonants.....	55
4.3 Phonotactic Structure	66
4.3.1 Structure of Lexical Roots	68
4.3.2 Structure of Grammatical Elements	70
4.3.3 Structure of Ideophones, Interjections and Onomatopoeias	70
CHAPTER FIVE: NOMINAL CATEGORIES AND THEIR MORPHOSYNTAX	72
5.1 Nouns and Noun-phrase	72
5.2 The Concept of Person, Gender and Number (PGN) Markers	72
5.2.1 Personal Pronouns and Case Distinctions	73
5.3 Nominal Gender Marking	80
5.3.1 Suffixes with Personal Nouns.....	80
5.3.2 Co-referential Pronouns.....	81
5.3.3 Number	82
5.4 Nominal Modifiers	88
5.4.1 Demonstratives	89
5.4.2 Adjectives	94
5.4.3 Possessives.....	98
5.4.4 Numerals and Quantifiers	105
5.4.5 Relative Clauses	114
5.5 Nominal Derivation.....	118
5.5.1 Nominal Compounding	118
5.5.2 Derivative Formatives	119
5.5.3 Male-female Distinction	120
5.5.4 Diminutive	120
CHAPTER SIX: ASPECTS OF TJWAO VERBAL SYSTEM.....	121

6.1 Transitivity Value.....	121
6.1.1 Intransitive Verbs	121
6.1.2 Transitive Verbs	122
6.1.3 Ditransitive Verbs.....	124
6.1.4 Ambitransitive Verbs.....	125
6.2 The Juncture Morpheme.....	125
6.2.1 Allomorphs of the Juncture Morpheme.....	128
6.2.2 Multiverb Constructions (MVCs).....	132
6.3 TAM in Tjwao.....	136
6.3.1 Imperfective <i>kua</i>	138
6.3.2 Future <i>-nya</i>	139
6.3.3 Anterior Particle <i>ka</i>	140
6.3.4 The Suffixes <i>-ha</i> and <i>-hĩ</i>	142
6.3.5 The Completive <i>-xu</i>	149
6.4 Valency-related Morphemes	150
6.4.1 Valency-changing Extensions	151
CHAPTER SEVEN: GRAMMATICALISATION OF NOMINALS AND VERBALS	161
7.1 Grammaticalisation of Selected Tjwao Nouns.....	161
7.1.1 The First Person Plural <i>tcoa.n</i>	161
7.1.2 The Agent Suffix <i>-tco</i>	162
7.1.3 The Nominaliser <i>-xu</i>	163
7.1.4 The Diminutive Suffix <i>-ũã</i>	164
7.1.5 Spatial and Temporal Terms: <i>ndjoro</i> >back/after and <i>kx'ai</i> >front/before	165
7.1.6 Grammaticalisations of the Numeral <i>lui</i> 'one'.....	168
7.2 Grammaticalisation of Tjwao Verbal Morphosyntax.....	170
7.2.1 <i>kua</i> (Imperfective)	170
7.2.2 <i>hĩ.a</i> (Future).....	171
7.2.3 <i>-hĩ</i> (Past)	173
7.2.4 The Suffix <i>-ha</i>	174
7.2.5 The Discourse Reference Marker <i>ta</i>	176
7.2.6 The Completive Suffix <i>-xu</i>	178
7.2.7 The Benefactive Suffix <i>-ma</i>	179
7.2.8 The Volition Suffix <i>-kaa</i>	180
7.2.9 The Morpheme <i>kama</i>	182
7.3 General Grammaticalisation Tendencies	184

7.4 Historical Findings	186
CHAPTER EIGHT: CONCLUSION	191
8.1 Summary	191
8.2 Limitations of the Study	194
8.3 Areas of Future Research	195
REFERENCES.....	196
APPENDIX I	215
Swadesh Tjwao word list	215
APPENDIX II.....	218
Morphology and Syntax	218
APPENDIX III	236
Story of the Origin of Fire.....	236

List of Figures

Figure 1: Provisional Classification of Tshwa Varieties	3
Figure 2: Tjwao Monophthongs (Oral Vowels).....	53
Figure 3: Tjwao Monophthongs (nasal vowels)	54

List of Tables

Table 1: Tjwao Place Names	5
Table 2: A Comparison of the Vowel Orthographic Conventions	50
Table 3: Non-click Consonant Orthographic Conventions.....	51
Table 4: Click Consonant Orthographic Conventions	52
Table 5: Tjwao Consonant Inventory	65
Table 6a-c: The Pronominal Paradigm of Tjwao.....	74
Table 7: Adnominal and Pronominal Demonstratives of Tjwao	94
Table 8: Juncture Allomorphs with the Perfect Suffix -ha	131
Table 9: Tjwao causatively extended verbs	152
Table 10: Verb Suffixes in Tjwao.....	159
Table 11: Nominal Lexical Sources and the Grammatical Forms	169
Table 12: Verbal Lexical Sources and Grammatical Morphemes	183
Table 13: Nominal and Verbal Grammatical Morphemes.....	185
Table 14: Grammaticalisation in Tjwao from a Historical Perspective.....	189

List of Maps

Map 1: Geographical Location of the Tjwa People in Tsholotsho	15
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Abbreviations

1	1st person	INTENS	intensifier
2	2nd person	INTJ	interjections
3	3rd person	IPFV	imperfective
ACC	accusative	J	junction
ADJ	adjective	LOC	locative
ADV	adverbial	M	masculine
ADVZ	adverbialiser	MPO	multipurpose oblique
AG	agentive	NEG	negation
ANT	anterior	NMZ	nominaliser
ATTR	attributor	NOM	nominative
BEN	benefactive	NUM	number
C	common gender	O	object
CAUS	causative	OBL	oblique
COM	comitative	ONO	onomatopoeia
COMP	complementiser	PASS	passive
COMPL	completive	PL	plural
CONJ	conjunction	PN	personal name
COP	copula	POSS	possessive
DEM	demonstrative	PRF	perfect
DIM	diminutive	PROG	progressive
DIR	directive	PRON	pronoun
DIST	distal	PROX	proximal
DU	dual	PST	past
F	feminine	PURP	purpose
FUT	future	QOUT	quotative
GEN	genitive	REC	reciprocal
GER	gerund	REF	referential
GN	general name	REFL	reflexive
HAB	habitual	REL	relative
HORT	hortative	SG	singular
II	active for past	STAT	stative
IMP	imperative	TAM	tense-aspect-modality

INT intentional

VOL volition

CHAPTER ONE: INTRODUCTION

The present chapter situates Tjwao within its extra-linguistic context and provides background information on its place within the wider study of the Kalahari Basin Area languages. Section 1.1 discusses the genealogical classification of Tjwao within the Khoe-Kwadi language family which itself forms part of the typological unit, ‘Southern African Khoisan’. Section 1.2 presents a brief history of the Tjwa people of Zimbabwe and provides sociolinguistic background information on the Tjwao language. Section 1.3 discusses the aims of the current study, including the problem statement, the research question, and the structure of the thesis.

1.1 Language Classification

Linguistic classifications of the Southern African click languages known under the label ‘Khoisan’ began in the late 1920s. Prior to that, scholars talking about Khoisan people never used any linguistic evidence but merely relied on looking at the cultural differences in the communities they studied and then extrapolating some linguistic conclusions on that basis. Bleek (1927) argues that by the 1920s, studies by linguists began to make use of linguistic evidence to ascertain the genealogical relationships between individual Khoisan languages. Linguists such as Greenberg (1963) treated Khoisan languages as a single language family with considerable genealogical depth, while others like Westphal (1971) and Köhler (1981) began to doubt the existence of a Khoisan family and rather focused on the genealogical relations within smaller units like ‘Central Khoisan’ (Khoe). From the 1960s to 1990s, Greenberg’s genealogical classification was the most favoured in the study of Khoisan languages.

With more research and new discoveries coming to the fore in the 1990s, Greenberg’s (1963) genealogical classification of Khoisan languages came under criticism. A growing number of linguists accepted the existence of three independent language phylae, namely, Khoe-Kwadi (cf. Vossen 1997, Güldemann and Vossen 2000, Güldemann 2004)², Kx’a (cf. Heine and Honken 2010) and Tuu (cf. Güldemann 2005). During this period, the typological approach began to predominate in comparative Khoisan studies, and similarities between presumably unrelated languages were perceived as phonological and morphosyntactic isoglosses shared within the ‘Kalahari Basin Area Sprachbund’ (e.g., Güldemann 1998, Güldemann 2014,

² The Khoe family, according to Vossen (1997), is split into two main groups, namely, Khoekhoe and Kalahari Khoe languages. The Kalahari Khoe languages are further divided into Western and Eastern Kalahari Khoe (cf. Figure 1).

Güldemann and Fehn 2017). This areal approach, which emphasises historical language contact and convergence in both concentrated geographical zones and more generally across the wider area of Southern Africa, has been adopted by the majority of scholars working in the field.³ Within the Kalahari Basin Area Sprachbund, a typological split between Khoe-Kwadi⁴ and non-Khoe has been observed (cf. Güldemann 1998, Güldemann and Vossen 2000). The languages of the non-Khoe group, namely, Kx'a and Tuu families, share several typological features which are distinct from those found in the Khoe-Kwadi languages.⁵ Güldemann (2014: 18) attributes the similarities between Khoe-Kwadi and non-Khoe languages to a complex history of convergence and language contact in the Kalahari Basin Area which stretches across Botswana, South Africa, and Namibia, with a small spill over into Zimbabwe.

Presently, the largest number of Khoe language speakers is found in Namibia and Botswana, with some small speech communities surviving in South Africa and Zimbabwe. While the classification of Khoe as a language family is widely accepted, its subclassification – especially of Kalahari Khoe – still poses some difficulties. To this date, many Kalahari Khoe languages, especially of the Eastern Kalahari Khoe branch, are not properly documented and have been neglected for a long period of time. According to Güldemann (2014: 38), this knowledge gap makes it difficult to propose a comprehensive classification of these languages.

The Tshwa group forms a continuum of Kalahari Khoe language varieties in the Khoe branch of the Khoe-Kwadi family. According to Vossen (1997), Tshwa is classified within the East Kalahari Khoe sub-branch of Kalahari Khoe, one of the two branches that form the Khoe lineage. Tjwao is not mentioned in Vossen's (1997) classification of the Khoe languages. Köhler (1971) groups three Eastern Kalahari Khoe varieties mentioned by various authors (cf. Dornan 1917, Westphal 1971, Köhler 1971), that is, Ganadi, Hietshware and !Gabak'e, under the term 'Tshwe'. While they may indeed constitute dialects of the same language, it could

³ For a counter argument of the "areal hypothesis", consult du Plessis (2009) who proposes the unity hypothesis in the study of Khoisan languages.

⁴ Based on pronominal evidence, Güldemann (2004, 2014) proposes a higher order Khoe-Kwadi group. To date, his suggestion has been followed by most scholars. 'Kwadi' is a moribund click language that is spoken by a small group of pastoralists in southwestern Angola (Güldemann, 2008, 2014). However, some scholars have doubted the classification of Kwadi with the Khoe family because data on this moribund language is thought to be largely insufficient (cf. du Plessis 2009 for detailed criticism).

⁵ For a detailed analysis of the different linguistics features between Khoe and non-Khoe, cf. Güldemann (2014). See also Fehn (2020) about the genealogical relationship between Kwadi and Khoe.

well be that these are clan names that do not necessarily refer to distinctive linguistic entities. In Zimbabwe, members of these clans refer to themselves as speakers of Tjwao.

Internal classification is being adapted to reflect the progress of the documentation of Eastern Kalahari Khoe languages. Based on the shared properties of their pronominal systems, Fehn and Phiri (2017: 106) suggest a two-way division of Tshwa varieties into “Northern Tshwa”, comprising G!labak’e, Tcire-Tcire and Tjwao; these likely contrast with the Southern Tshwa varieties comprising Kua, Tsua and Cua. Pratchett (2020) concurs with Fehn and Phiri (2017) in the assumption that a clearly differentiated unit, “Southern Tshwa”, exists. He argues that the diversity and complexity within Southern Tshwa is even bigger than what has been reported for Northern Tshwa. The figure below shows a preliminary classification of the Khoe-Kwadi language family, including new information on the subdivision of the Tshwa dialect cluster:

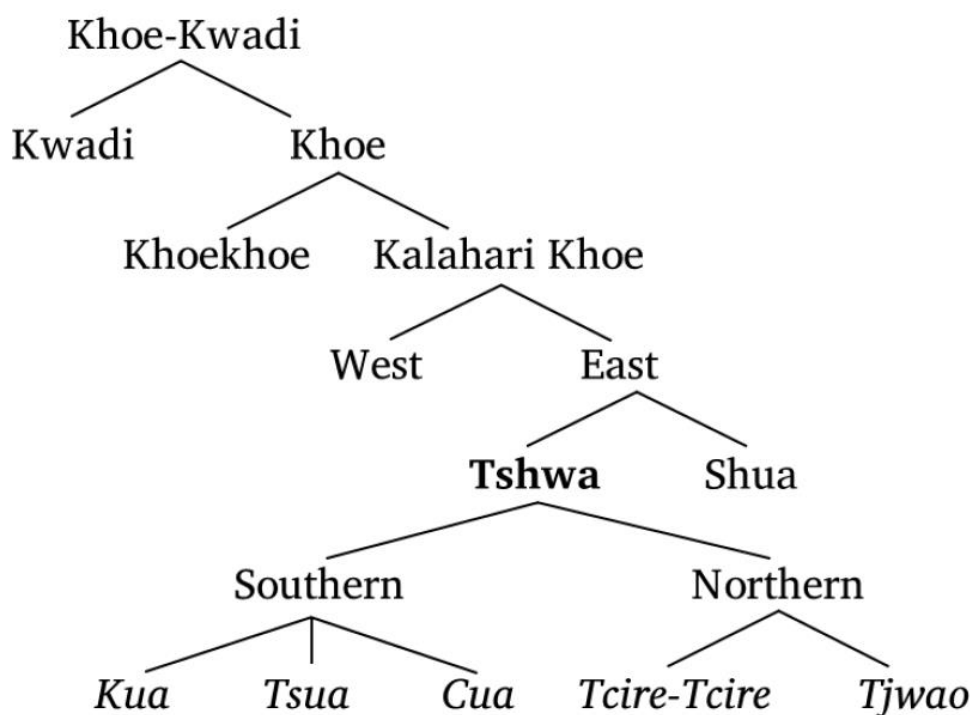


Figure 1: Provisional Classification of Tshwa Varieties (Güldemann 2014, Fehn and Phiri 2017).

1.2 A Brief History of the Tjwa People and their Language

This section offers a historical overview of the Tjwa⁶ from the early pre-colonial through to the post-colonial period.

1.2.1 Who are the Tjwa⁷ People?

Both historical and archaeological evidence suggests that the San were the first people to occupy the Southern African region before the immigration of Bantu-speaking peoples who probably arrived as early as 300 AD (Mitchell 2010: 72-93, 2013: 473-488). In Zimbabwe, the ancestors of the Tjwa⁸ were the first people to occupy mainly the western parts of the country (cf. Dornan 1927, Davison 1967, Wilmsen 1989, Haynes and Janis 2009, Haynes 2014, Hitchcock *et al.* 2016). They form part of the many former nomadic ‘hunter-gatherer’ communities who now live in the greater Kalahari Basin region.

Adding to the historical and archaeological findings, toponyms also lead to the conclusion that the Tjwa people are autochthonous to western Zimbabwe. It is generally argued that place naming is a highly efficient mechanism of showing control over the land (Mamvura 2015: 25). Toponyms are key elements of the dominant culture and are crucial in maintaining the history of people. Before the arrival of the Bantu people, the Tjwa declared their presence in particular areas by naming them in their language. Some of the place names are still remembered by the Tjwao speakers and they exist in Tsholotsho – a district in Zimbabwe’s Matabeleland North Province where the last remaining Tjwa speakers reside. Fonteijn (2015) argues that the continued usage of names and ideas formerly used by the dominated group by their conquerors reflects the moral authority that the vanquished had over the territory. The table below provides a summary of Tjwao toponyms still remembered by the speakers:

⁶ Ndlovu (2017: 13) states that according to the San elders, the San people in Zimbabwe call themselves the Tjwa, and their language is called Tjwao. He further adds that, “I was glad to hear this hoping that this was going to make my reconstruction of the Tjwa history easy, unfortunately, the Tjwa history had left no written records that I could use as reference material.” According to Vossen (1997), the word ‘Tjwa’ means person. Two assumptions can be made concerning the vowel /o/ in Tjwao. Firstly, one can suggest that it is a nominaliser. Secondly, it is possibly an old possessive marker which is also found in Khwe. Therefore, Tjwa -o would then mean “that of Tjwao”.

⁷ In this dissertation, Tjwa is used to refer to the research participants who described themselves as such throughout the course of the field work. San in this study refers to the larger population of the San people in Zimbabwe (i.e., the Tjwa who reside in Tsholotsho District and those that live outside Tsholotsho), and when referring to the San groups in Botswana, South Africa, and Namibia.

⁸ According to Dornan (1925: 18), the term Kalahari is of Tswana origin, and has the same meaning as Makarikari, which in Setswana means salt pans. The area is called Kalahadi by the Tswanas, d and r being interchangeable in various Tswana dialects, and occasionally Kalakhari or Karikari (Ibid.).

Table 1: Tjwao Place Names

Tjwao	English Translation	Place
<i>lui-se lxuru</i> <i>lui-se lxuru</i> One-ADV cold	‘To be cold alone’	Village
<i>lx’ao gama-xu</i> <i>lx’ao gam-a-xu</i> snake throw-J-COMP	‘To throw away a snake.’	Village
<i>globo-xolo</i> <i>globo xolo</i> mud pool	‘Pool of mud (place full of mud).’	Village
<i>tcoo.xo-re</i> <i>tcoo xo-re</i> <i>medicine thing-PL</i>	‘Medicine things’	A place in the forestry where a tree to appease the spirits is found.
<i>ts’ãã gãĩ kx’oo.xo</i> <i>ts’ãã gãĩ kx’oo.xo</i> steal springbok meat	‘Meat of a stolen springbok.’	Cattle post
<i>gãĩ-sii</i> <i>gãĩ sii</i> springbok fart	‘The fart of a springbok.’	Village
<i>lxan-lxan</i> <i>lxan- lxan</i> wild.fruit.sp	‘Type of wild fruit (the place is surrounded by plenty of the trees).’	Village
<i>lxara-djina</i> <i>lxara djina</i> many well	‘Many wells’	A place in the forestry where there were wells. Animals used to come and drink water.
<i>ndjuu-tco lx’an</i> <i>ndjuu tco lx’an</i> black person ugly	‘The ugliness/bad behaviour of a black person.’	Cattle post
<i>nguri-ha</i> <i>nguri-ha</i>	‘Behaved badly.’	Dam

behave.badly-J-PRF		
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Another toponym that is not listed in the table above is ‘Tsholotsho’. There are contesting views on the origins of this name. Some Kalanga elders in the area say that the Tsholotsho communal lands were littered with elephants’ carcasses and, because of that, the place became known as *Holo-ya-Hou* which means ‘elephant heads’ in Kalanga. The Tjwa elders debunk this claim arguing that the name Tsholotsho has nothing to do with elephants but is derived from the word *Tsoro-tsoo*⁹, a Tjwao word meaning a ‘bark medicine’; *tsoro* means ‘bark’ and *tsoo* means ‘medicine’.

1.2.2 Their Life before Colonisation

In the pre-colonial era, the San lived in small groups of between 5 to 35 people per group. They were outnumbered by the Bantu-speaking people surrounding them (Beach 1984). The fact that they did not practise a sedentary lifestyle prevented them from practising agriculture, and this ultimately worked against the setting up of centralised authorities. This lifestyle, as well as sexual restraint, continued breastfeeding and the use of natural contraceptives, also curtailed population growth. Maintaining a small population enabled the San to live in peace and harmony, with the scarce resources available to them. Of note is that since the western region was prone to droughts, the land could not have sustained large population numbers.

Politically, the San mode of production did not allow them to have a hierarchical structure. They lived in closely-knit communities consisting of grandparents, parents, children, grandchildren, and other members of the extended family. Each community practised a consensual democracy: the community head had no real power, and everyone was involved in decision-making processes. No single person had enough wealth to exert influence on others and become their ruler.

Economically, the San relied heavily on the veld for their living. As part of their survival skills, they practised hunting and gathering as evident in rock paintings from the region. There was division of labour amongst men and women; while men went hunting, women and children were largely left to gather fruits, plants, and small animals. Their diet consisted of roots, tubers,

⁹ *Tsoro-o-tsoo* is the name of a non-governmental organisation (*Tsoro-o-tso* San Development Trust) which was formed in 2012.

nuts, berries, and ants. They used arrows, spears, and dogs to kill animals for meat. Since their entire subsistence revolved around hunting and gathering, this controlled their way of life in several ways. As discussed above, they could not settle down in one area, but moved from one place to other in search of wild animals and fruits.

With regards to spiritual beliefs, the San did not have an organised religion (Dornan 1925: 54). They paid respect to the mantis, which they called *kang* or *kaggen*, and would not kill it if they could avoid it. When men went out hunting and came across a mantis, it was viewed as a sign of luck. In an interview with some of the Tjwa elders, they indicated how many years ago they believed in a dualistic concept of drawing on the existence of good and bad spirits.

Dance used to be an integral part of the San's social life. They were passionately fond of dancing especially during a full moon when the night was high, and on special occasions marking the seasons of the year, such as the beginning of the rains. The families would come together to celebrate their achievements through dancing during which everyone was an active participant, including children.

The arrival of the Ndebele people led by King Mzilikazi in the western parts of Zimbabwe in 1838 had devastating effects on the San people's way of life. After successfully conquering the western region, the Ndebele kingdom established a society comprising three classes of people: the *Zansi*, *Enhla* and *Hole* (cf. Cobbing 1976, 2003, Beach 1994, Msindo 2002, Mazarire 2003). The San were part of the *Hole*, who formed the lowest class of society. They were not necessarily subject of the Ndebele state, but they either paid tribute or were expected to show some loyalty to the Ndebele king.

The correlation between the San, the Ndebele and the Kalanga people was characterised by conflict and suspicion. In 1872, the Ndebele killed several San men, women, and children in the sandy area around Wankie (now Hwange), after accusing them of stealing from the Ndebele (Hyanes 2014: 25). For their part, the San accused the Ndebele people of witchcraft, and thus preferred not to live side by side with them (cf. Madzudzo and Dzingirai 1995). Unlike the Ndebele, the Kalanga, and the San shared pacifist traditions. They rejected aggression and war in preference for a peaceful co-existence with their neighbours (cf. Ndlovu 2017). However, this does not mean that the San and the Kalanga were on good terms. During interviews, the

participants pointed out that the Kalanga people were also accused of witchcraft. Therefore, before the arrival of the Ndebele, the Tjwa tried to stay away from them.

Both Ndebele and Kalanga spoke of the San with contempt as evident from the various derogatory names¹⁰ they used to refer to the San people. For example, the Ndebele referred to the San as snakes and treated them as pests (Ndlovu 2017). In addition, the Ndebele used the pejoratively *iSili* (singular) and *amaSili* (plural) to refer to the San. According to the Tjwa elders I interviewed, the noun is derived from the Ndebele verb *-sila* ‘to survive’, which was used in phrases such as, *laba abasila ngathi*, which means “those who survive because of the work we render to them”. The Kalanga, on the other hand, called them *abaKhwa* ‘those with no agricultural activities for livelihood’. These names reflect social hierarchies and ideas about territoriality, resembling those found among European colonisers who believed that “barbarians” were supposed to reside outside the city (Dande p.c.).

Another Ndebele term for the Tjwa is *umThwa* (singular) or *abaThwa* (plural). During interviews with the Tjwa elders, the following story emerged: When king Mzilikazi arrived with his people in the 1820s, a Tjwa (San) woman (*uMthwa*) was regularly seen moving around in the bush. The chiefs decided to inform Mzilikazi about this unfamiliar woman. But the king did not believe them. One day, King Mzilikazi met the San woman who reportedly told him that the people living in the area were peaceful and abhorred war. She told Mzilikazi that he and his people could stay, as long they would not disrupt the lives of the San. The king then gathered his chiefs and informed them that they had been given permission to stay in the land by *umThwakazi*¹¹ “a female Tjwa”.¹² Due to linguistic dominance by Bantu speakers in the pre-colonial period, the Ndebele language became the language of political influence and power. Minority language speakers from San, Kalanga and Venda groups in Matabeleland South and

¹⁰ It was not only in Zimbabwe where the San were called derogatory names. In Botswana, the Tswana people called them *baSarwa*, from the Bantu word stem *rwa* (or *twa*, or *tua*), meaning outlanders, or inhabitants of uninhabited land (Haynes 2014: 85).

¹¹ *um*= noun class 1 prefix, *thwa* means ‘San’ and ‘*kazi*’ is a noun stem suffix to denote feminine.

¹² The recent call by some Ndebele activists to set up a Ndebele state to be called Mthwakazi also points to the importance of the San in current discourses about ethnicity and the nation-state. As shown above, Mthwakazi was a San woman who allegedly told Mzilikazi that her people were a peaceful people who disliked violence. Given post-colonial repression of the Midlands and Matabeleland provinces by the post-colonial state, the Ndebele activists fighting to set up this separate state have settled on this name because it conveys a pacifist political tradition. While this recent attempt to put this Tjwa matriarch’s name to prominence is important, it also shows approbation of the cultural heritage of minorities by the dominant ethnic groups. The Mthwakazi movement grew in strength after 2000 due to the growth of opposition political parties, as well as recent calls for national dialogue with regards to the 1983-1987 Matabeleland massacres. These calls have also been strengthened by the government’s refusal to call for a national dialogue about this dark era in the country’s history.

North identified with Mzilikazi and inevitably adopted this leader's language for the sake of social prestige.

1.2.3 Colonial Era: 1890-1980

The arrival of the British settlers in the 1890s contributed to the abandonment of the Tjwao language as it was linked to a lifestyle perceived as backward and impoverishing. Significant adjustments in Land Tenure and Administration happened between 1890 and 1896 (cf. Fleming 1974: 59). The British South Africa Company administrators of the future Rhodesia colony passed the Order in Council to create "native reserves", with Gwaai and Shangani piloting the project. The colonial government continued to take land from the indigenous communities through various land and labour legislation. In 1898, the Department of Native Affairs was formed: it consisted of native commissioners whose duty was to control the indigenous people in everything they did. The native commissioners' primary responsibility was to administer the Land Apportionment Act of 1931 and the Land Husbandry Act of 1951 implementation. The Land Apportionment Act (cf. *Land Apportionment Act, No. 30, 1930*) divided the land into European and African reserves and forcibly removed the San people from the forest to which they were spiritually attached. The reserves assigned to the indigenous people were largely barren and marginal lands (cf. Wilson 1923: 88-89). According to Meredith (2002: 113), a decade after the arrival of the white colonists, approximately 16 million hectares had been taken by the colonial government from the indigenous people.

The Tjwa people were part of the indigenous people who were relocated to the reserves far away from the forest, depriving them of their foraging grounds and subsistence strategies. Hunting wildlife became illegal over the next few years and the colonial administrators established rules which forbade snaring, mass-driving, and the digging of game pits. Incidentally, those were the methods most in use among the Tjwa people when hunting. For the colonial government, hunting was not a means of subsistence but a "fair chase" exercise, more of a personal taste and not so much a pursuit of food, certainly not a way of life (Haynes 2014: 110).

The resettlement of the Africans from areas designated as 'game reserves' was implemented across the nation.¹³ The colonial government argued that human beings and wildlife could not

¹³ See also Tavuyanayo (2016, 2017) on the establishment of Gonarezhou National Park, 1957-1968.

live together. Barriers such as fences, were used to protect wildlife from the indigenous people. When Wankie¹⁴ was declared a game reserve in 1928, the Tjwa people were not immediately evicted to the reserves. The resettlement of the indigenous people was formalised in the Land Apportionment Act of 1930. The game reserve was later upgraded to the status of the national parks in 1949.

Although the Tjwa were previously in contact with the Ndebele and Kalanga people, they never lived side by side with them as the former lived a nomadic way of life. The resettlement from Wankie Game Reserve to Tsholotsho led them to abandon their nomadic way of life and forced them to live together with the Ndebele and Kalanga peoples in the reserves. The Tjwa thus had to abandon their traditional lifestyle of hunting and gathering fruits. Although they were pressured to adjust to an agriculture-based lifestyle in the 1930s, they were never provided with the resources necessary for farming. Consequently, the Tjwa hired themselves as cheap labourers to the Ndebele, the Kalanga, and white settlers in their grain fields during ploughing, weeding, and harvesting periods. In addition, they also became mine workers and cattle herders.¹⁵ This had a devastating effect on the Tjwao language. The Tjwa people were forced to gradually learn other languages of commerce, and, over the years, their ancestral language was slowly eroding. For some Tjwa elders, there was no need to pass the language to the younger generation. They thought it was a waste of time to teach the children since it would not help them to obtain jobs from the Kalanga, the Ndebele, and white settlers. Tjwa speakers also shifted to Kalanga and Ndebele because Tjwao was looked down upon by other ethnic groups. Consequently, speaking Tjwao was associated with poverty and inferiority.

Moreover, Tjwao being amongst the minority languages was greatly affected by the colonial education policies. When formal education was introduced in the colonial era (1927), English became the *lingua franca* for business, government, education, and social communication. The colonial government favoured the use of only two indigenous languages, Shona, and Ndebele, which were chosen for their popularity and large numbers of speakers (Chimundu 2000, Hungwe 2007, Ndlovu 2013). The implemented policy of teacher training or curriculum

¹⁴ The place was named after Chief Wankie of the Nambya People (cf. Davison 1963).

¹⁵ The Ndebele and Kalanga have a system known as “*ukusisisa*” or “*sayidza*”, respectively. This denotes an arrangement in which a cattle owner hands his cattle to a herder, and after a year, the owner thanks the herder by giving him a heifer. This system is vital since it enables families without cattle to have their own herds. Such a system was not practised with the Tjwa people. The Ndebele and Kalanga thought that if the Tjwa became cattle owners, they would lose the cheap labour supply for their fields and cattle posts (cf. Madzudzo: 2001: 83).

development was not in favour of the minority languages. With the expansion of education, the government saw the need to provide schools with literature to use. The Rhodesia Literature Bureau was established in 1954 to primarily publish literature in Ndebele and Shona. This resulted to the growth of the two above-mentioned languages which culminated in the publication of the first novels in 1957, thus totally ignoring other local languages. While it could be argued by some scholars including Steele (1972) that English prevented the growth of most indigenous languages, this thesis shows how the development of Ndebele and Shona equally contributed to the underdevelopment of marginalised Zimbabwean languages during the colonial era.

1.2.4 Post-colonial Era: 1980 to 2010

In 1980, Zimbabwe obtained political liberation from Britain. However, there was more continuity than change. In the early years post-1980, conflict between the Zimbabwe African National Union-Patriotic Front party (ZANU PF) and Zimbabwe African People's Union party (ZAPU), emerged. In 1983, ZANU PF accused ZAPU of having an arms cache and of seeking to overthrow the government through dissident activity. What followed was 'Gukurahundi' (the name used by the Shona people to refer to the early rains that wash off the rubbish), a military operation which witnessed the massacre of minorities residing outside the Mashonaland areas, all in the name of flushing out the so-called dissidents. The government deployed a special military wing called the Fifth Brigade in Matabeleland South, North provinces, and some parts of the Midlands province. Although the Fifth Brigade claimed that it targeted 'dissidents', most beatings and atrocities were, however, committed against unarmed civilians. An estimated number of 20 000 people were massacred between 1983 and 1987 (cf. The Catholic Commission for Justice and Peace in Zimbabwe and The Legal Resources Foundation 1997).

The Fifth Brigade mainly consisted of the Shona people, and it is believed that the military wing used ethnic and political reasons to justify the violence that it perpetrated against defenceless civilians. In certain places, people were forced to speak Shona (Eppel 2004: 45). The victims were persecuted because they were Ndebele. Since this was a tribal war, the Ndebele were linked with ZAPU and all those who supported ZAPU were dissidents. These disturbances lumped all the other ethnic groups residing in the southern and western parts of

Zimbabwe as Ndebele (i.e., Tjwa¹⁶, Kalanga, Venda, Nambya, Tonga). The forced identification of all these groups with the Ndebele demonstrates that the government had little interest in the existence of their actual languages and cultures. Due to the violence of life-threatening situations, the 1980s were a difficult period for the Tjwa people. Most of them crossed the border to Botswana as they sought refuge. During the interviews, one of the participants mentioned that when he fled with his family to Botswana and they stayed in Nata, it was easy for them to adjust to the environment because they could easily communicate with the Kalahari Khoe-speaking San who reside in the area (e.g., Tciretcire and Shua).

The warring parties negotiated a power-sharing deal that brought about peace in 1987. The leaders of ZAPU were assimilated into the ZANU party which came to be known as ZANU PF. Although ZANU PF and ZAPU brought political independence, they did not bring about an inclusive government system in which all minority languages could thrive. The government of the day used the dominant Ndebele and Shona as exclusive languages of wider national communication and discouraged the use of minority languages. ZANU PF deliberately forced everyone to either speak Ndebele or Shona, and to this date, the Shona/Ndebele hegemony over other minority languages persists. This includes the hegemony of the main dialect of Shona, Zezeru, over other Shona dialects like Karanga, Manyika and Korekore, even in areas where the speakers of these dialects contribute a considerable number of voters. Being a minority language spoken by a small community, which was not a part of the political elites in the country, Tjwao suffered even more than other minority languages.

The marginalisation that the Tjwa people faced both during the post-colonial destabilisation (1983 and 1987) and in subsequent periods of famine (1990s) disrupted their sense of community.¹⁷ The food scarcity and marginalisation they have been threatened with over the years have become the most imminent danger to their language and culture. Their supposed failure to participate in sustainable farming must be linked to the dry climate of the region,¹⁸ rather than to their lack of skill or interest.

¹⁶ Since the Tjwa people were the smallest minority group, the genocide of Gukurahundi also led to a decline in the number of Tjwao people.

¹⁷ The whole region is neglected including the Ndebele and Kalanga. However, the Ndebele and Kalanga are organised and are politically important. Hence, they did not give concessions to the Tjwao.

¹⁸ Tsholotsho District lies in the semi-arid agro-ecological zones 4 and 5. See also (Madzudzo 2001: 79) for a detailed summary of the agro-ecological or natural regions of Zimbabwe.

The post-colonial government has unfortunately accepted some colonial narratives of the Tjwa's laziness as historical truths. During the food shortages of the 1990s, newspapers in Bulawayo spoke extensively about the Tjwa. Government authorities instructed reporters to write about the community, and some of the headlines read as follows: "San change their way of living. Nomadic Bushmen settle down" (*The Sunday News* 26 September 1993: 2), "San struggle to adapt to new ways" (*The Bulawayo Chronicle* 18 September 1993: 2-4), "Death threat: Starvation might wipe out the San" (*The Bulawayo Chronicle* 17 July 1995: 1-4). In addition, leaders such as the late President Robert Gabriel Mugabe reinforced arguments that the Tjwa were agriculturally inept and that they were also indolent.¹⁹ In 2013, Mugabe stated publicly that the Tjwa people had resisted "getting more civilised" because they did not send their children to school, they "like meat more than we [meaning the other population groups of Zimbabwe] do", and they "want to just...heard cattle for the Ndebele and Kalanga and be in the bush" (*News Day* 14 May 2013).

During the post-colonial era, poverty forced the remaining Tjwao speakers to continue sending their children at a tender age to work for the Kalanga and Ndebele. This separated youngsters from the community at a time when they were hypothetically supposed to master their mother tongue language. Some crossed the borders to work in South Africa and Botswana, and learned the languages of the other ethnicities, especially those helping them to secure jobs (e.g., Kalanga, Ndebele, Tswana).

Marginalisation by the state also made the Tjwa vulnerable to local pressures over resources, pitting them against other dominant groups such as the Ndebele and Kalanga. There were narratives about Tjwa girls being impregnated by Ndebele men who were subsequently asked "if they have ever seen a cow mating with a donkey" (Ndlovu 2017: 50).²⁰ Evidently, the Tjwa and their language and culture keep being on the receiving end of negative otherisation from the dominant cultures. In 2012 the Tjwa people complained that dominant local groups, that is, the Ndebele and Kalanga would ask them for land to build homesteads. Upon receiving the land, the recipients allegedly turned against the Tjwa and refused to obey the local traditional authorities and rules, thereby eroding Tjwa people's sense of community as well as their

¹⁹ The European colonisers used the same word to describe Africans in general (Innocent Dande p.c.).

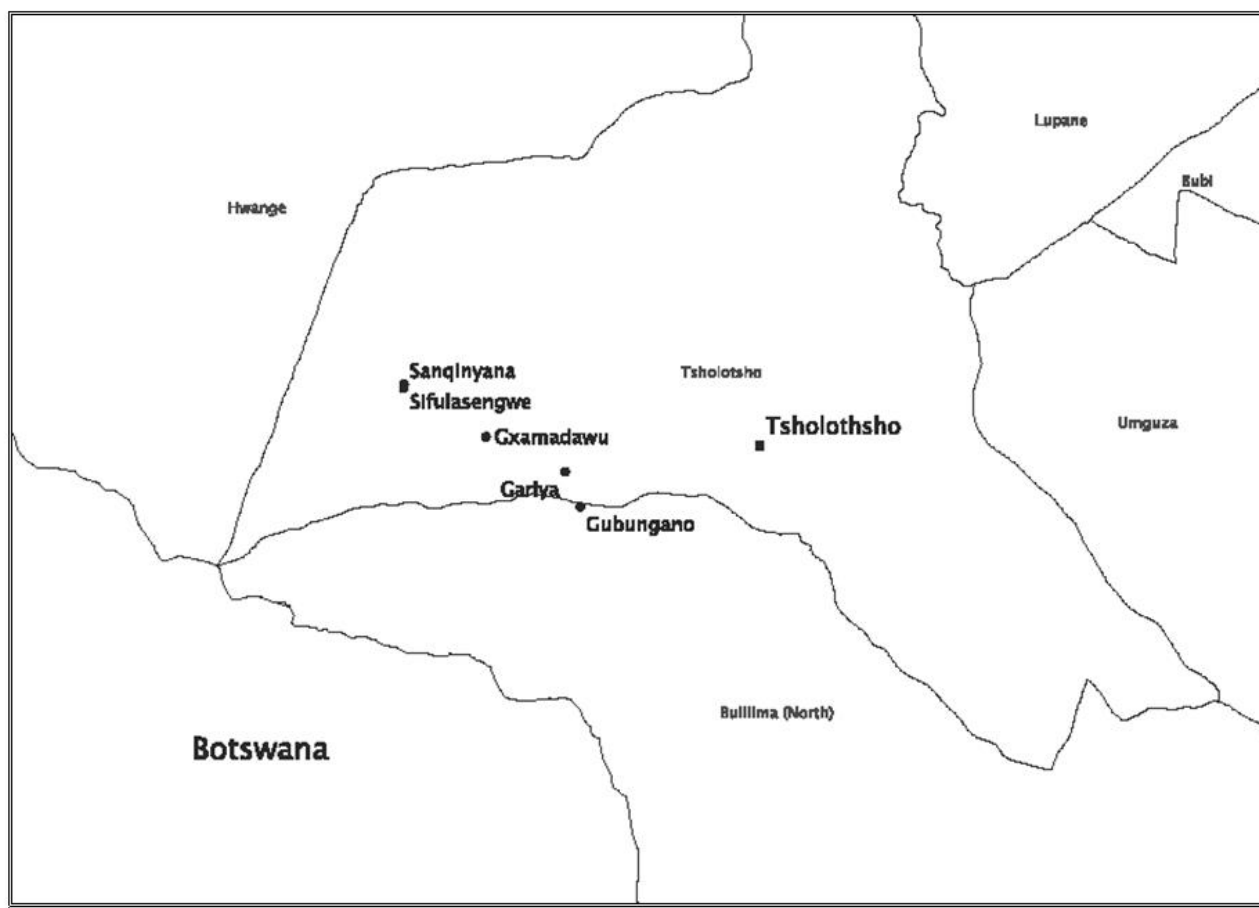
²⁰ This is a derogatory comment that means that people with prestige cannot marry those of lower class.

institutions (Ndlovu, *ibid*).²¹ The refusal of governing authorities to include the Tjwa in government considerations at the national level reinforces their marginalisation at the local level where other dominant groups, namely, the Ndebele and Kalanga disrupt their local institutions and push the Tjwa out of their lands. During the interviews, participants indicated that the Tjwa had always been left out of governmental food distribution programmes. During the Fast-Track Land Reform Programme that happened in the year 2000, the Tjwa were not granted commercial farming land (Hitchcock *et al.* 2016: 36). Conversely, Ndlovu (2017) argues that during the mentioned Land Reform, the Tjwa did not participate because they wanted to stay close to the National Park where they poach wild game.

1.2.5 Current Socio-linguistic Status

Presently, the Tjwa people are the smallest minority group in Zimbabwe. According to Ndlovu (2017: 59), their population size in 2013 was approximately 1 680, whilst Hitchcock *et al.* (2016: 21) have put it at 1 021. In his census study, Madzudzo (2001: 79) notes that in Tsholotsho District, the Tjwa people constitute 2% of the population, the Kalanga 48%, and the Ndebele 50%. The Tjwa people reside in closely connected villages that are situated in areas very far from Tsholotsho business centre close to the border of Zimbabwe and Botswana. Map 1 below illustrates the current geographical location of the Tjwa people in Tsholotsho district.

²¹ This is the weakness of communal tenure, and the government also does it to the Shona or Ndebele; thus, the dominant ethnicities have begun to do it to others.



Map 1: *Geographical Location of the Tjwa People in Tsholotsho (Phiri 2015: 5)*

At present, the only remaining Tjwao speakers are seven elders aged between 65 years and 90 years. Most adults use Kalanga and Ndebele as an everyday language, the same languages that are also most commonly employed to address Tjwa children. The younger generation only retain a passive understanding of Tjwao since in schools they are only taught Ndebele, Kalanga, and English. Since colonial times, the youngest members of the community have not been convinced of the value of learning their ancestral language.

The efforts to revive and document the Tjwao language were spearheaded by activist Davy Ndlovu in 2010.²² Ndlovu has been very active in making people aware of the impending demise of the language. He has been working towards bringing awareness to the plight of the Tjwa, the threats to their language, and their marginalisation by government. Additionally, Ndlovu has published a book, *A New Age for the San in Zimbabwe*, detailing his activist work.

²² Davy Ndlovu is a languages activist and the founder and director of the Tsoro-o-tso San Development Trust, who has been working with the Tshwa people since 2010, trying to help them revitalise their language.

Every year, the Tjwa community now celebrates the International Mother Language Day, which was declared by UNESCO's General Conference that took place in November 1999 to increase the appreciation of and promote respect in all spheres of public life for all languages, including education. To celebrate the occasion, the remaining fluent Tjwa speakers camp in the bush with children and some Tjwa elders for two days. Helped by Ndlovu and myself, they revive, document, and preserve the language of the Tjwa people of Zimbabwe through oral storytelling, arts, and informal learning methods. Although the language is slowly moving into extinction, the few remaining speakers have tried to safeguard their cultural heritage, value system and indigenous knowledge through *ibooro* dance and songs (cf. Methodology Chapter).

Despite its endangered state, Tjwao attained the status of an official language in 2013.²³ So far, little has been done by government to develop or document the language. The Tjwa were irked when the Constitution drafters made a grave mistake of identifying their language as “Khoisan”²⁴ instead of “Tjwao”, a clear indicator that despite being the oldest ethnic group in Zimbabwe, the Tjwa people are virtually unknown and looked down upon even by public institutions.

1.3 The Present Study

The current study contributes to the field of documentary linguistics by providing a grammatical description of Tjwao morphosyntax. It is part of an on-going documentation project of the Tjwao language which entails the collection of a corpus of audio and video recordings that are accompanied by transcriptions and translations, metadata, and pertinent photographic material. The additional outcomes of this project encompass materials for community use to assist in teaching the language, including two unpublished Tjwao primers, wordlists with Ndebele and English equivalence, and unpublished picture books. Additionally, genealogical, and sociolinguistic profiles of the Tjwa people have been compiled, and the group's cultural background is currently being documented.

Güldemann (2014: 38) points out that “there is insufficient crucial information on certain languages, specifically, those of the Eastern Kalahari Khoe branch”. This has fostered an urgent

²³ Section 6 of the Zimbabwe Constitution states that Tjwao is an officially recognised language and the state must encourage and develop its use in Zimbabwe (Constitution of Zimbabwe Amendment Number 20, 2013:17).

²⁴ The term ‘Khoisan’ does not actually refer to a uniform ethnic or linguistic entity but is used in this study to refer to the non-Cushitic, non-Bantu click languages of Eastern and Southern Africa (Fehn 2016: 1).

need to investigate those languages since they promise to disclose essential data about the history of the Khoe family. Tjwao is one of the under-described and undocumented varieties of the Eastern Kalahari Khoe branch. Before the current research, no linguistic study of Tjwao was undertaken, and verbal and nominal morphosyntax have not been addressed in detail for any known language of the Tshwa branch of Eastern Kalahari Khoe. In the current study, collected data is described following the Basic Linguistic Theory approach (Dixon 1997, 2010, Dryer 2006, Haspelmath 2015), while relevant aspects of nominal and verbal morphosyntax are addressed in the framework of the Grammaticalisation Theory. I argue that some aspects of nominal (e.g., nominal derivation) and verbal (e.g., TAM suffixes, verbal derivation) morphology, analogous to other Khoe languages, have historically evolved from lexical sources. In the relevant sections (cf. Chapter 7), an effort is made to identify the pathways of changes that may have occurred during the grammaticalisation process in Tjwao.

The sources of verbal and nominal morphemes in Tjwao and the grammaticalisation clines²⁵ that underlie them are derived from: (a) functional and structural properties exhibited synchronically by the analysed Tjwao forms, as well as the properties of the cognate constructions found in closely related languages of the Kalahari Khoe branch; (b) the compatibility of such synchronic functional and structural profiles with grammaticalisation paths established empirically in linguistic typology; and (c) the dynamic alignment of the paths proposed for Tjwao with the development tendencies that have already been identified for respective cognate constructions in other Kalahari Khoe languages (cf. Kilian-Hatz 2002, 2008; Vossen 1997, 1998, 2013; Fehn 2016, 2019). This composite method – referred to as ‘dynamisation of typology and synchrony’ – will allow for the adoption of a diachronic perspective, despite the absence of direct diachronic evidence.

1.3.1 Problem Statement, Research Question and Objectives

The study addresses two problems. Firstly, there is a pronounced scarcity of studies dedicated to Tjwao grammar, especially, its nominal and verbal morphosyntax. Secondly, the position of Tjwao within the Eastern Kalahari Khoe subgroup of Kalahari Khoe is still uncertain. Against this backdrop, the study seeks to answer the following research question:

What are the lexical origins of the different grammatical morphemes that are observed

²⁵ For the terminology, see Hopper and Traugott (2003: 6).

in Tjwao nominal and verbal morphosyntax?

Having outlined the problem statement and formulated the research question, the study has the following specific objectives:

- i) To describe the nominal system of Tjwao using Basic Linguistic Theory.
- ii) To describe the verbal system of Tjwao using Basic Linguistic Theory.
- iii) To demonstrate the genesis of different grammatical morphemes using the grammaticalisation approach.
- iv) To use certain data from other related languages of the Kalahari Khoe branch to support claims made in the study.

1.3.2 Ethical Considerations

The ethical clearance was obtained from the Stellenbosch University Research Ethics Committee for a research project titled: “Fieldwork to Study the Verbal System and Other Aspects of Tjwao (Kalahari Khoe), A Highly Endangered Khoesan Language of Zimbabwe”. Documents that were approved included the informed consent forms and the structured interviews. This approval was for the period from 25 August 2016 to 24 August 2017. Approval to work with the community and application for an extension of the ethical clearance was obtained. Official permission was also obtained from the Tsoro-o-tso San Development Trust, the Zimbabwe Republic Police and the Tsholotsho District Administrator to work with the community members.

1.4 The Structure of the Thesis

This dissertation comprises 8 chapters. Chapter One introduced the whole study. I began by providing a broad overview of the language under investigation i.e., its classification, history, and current situation. Then, I described the background to the study, provided the problem statement, outlined the research objectives, and introduced the research question.

In Chapter 2, I contextualise the study through a review of existing descriptions of Khoe languages (both Khoekhoe and Kalahari). This review provides concepts relevant to the study and points out issues that still need to be addressed. I also provide a comprehensive overview of literature on grammaticalisation in Kalahari Khoe languages.

In Chapter 3, I discuss the methods used to collect data and the theoretical frameworks adopted in this thesis. I begin by discussing the qualitative research method, how fieldwork was carried out, and selection of participants. In addition, I give an outline of the two theories of choice used in the study, that is, Basic Linguistic Theory and the Grammaticalisation Theory. The suitability of the two frameworks for the present study is discussed and justified.

In Chapter 4, I give a descriptive account of Tjwao phonetics and phonology and present the orthographic conventions adopted in the study. I then discuss vowel and consonant sounds in detail. I also describe the phonotactic structure of Tjwao.

In Chapter 5, I present data on the nominal morphosyntax of Tjwao. The chapter discusses nominal marking and case distinctions, as well as nominal modifiers and nominal derivation.

In Chapter 6, I present data on the verbal morphosyntax of Tjwao. I first focus on transitivity value, then I discuss the juncture morpheme and its allomorphs, as well as pertaining multiverb constructions. Finally, different derivational suffixes and aspect changing morphemes are addressed.

In Chapter 7, I use evidence from chapters 5 and 6 to discuss the grammaticalisation of grammatical morphemes in Tjwao. I contextualise my own data with examples from other Kalahari Khoe languages, as well as with evidence from other different languages families. To conclude, I provide a summary of grammaticalisation in Tjwao from a historical perspective.

Chapter 8 offers a summary and outlook for future research. Following the conclusion, an appendix with Tjwao corpus is presented.

CHAPTER TWO: LITERATURE REVIEW

The chapter examines the diverse linguistic approaches that have been applied to analyse languages of the Khoe family, ranging from complete grammatical descriptions to in-depth treatments of selected topics in phonetics, phonology and morphosyntax. Section 2.1 presents work which focuses on the entire Khoe family, rather than on specific languages. Section 2.2 offers a summary of the most important studies available on the family's Khoekhoe branch. Section 2.3 offers a comprehensive review of what has been published on the Kalahari Khoe subgroup, with a special focus on the under-documented Eastern Kalahari Khoe branch of which Tjwao forms a part. Section 2.4 discusses literature on grammaticalisation in Kalahari Khoe languages.

2.1 The Khoe Language Family

The main reference work on the Khoe language family (or 'Central Khoisan'), its members, and historical relations, is Vossen (1997). His monograph establishes Khoe as a family, employing the historical-comparative approach. In the introductory section of his work, Vossen (1997: 31-53) provides a thorough review of the research history leading up to his own study, paying special tribute to Westphal (1956, 1962a, 1962b, 1963, 1971), Köhler (1962, 1963, 1966, 1971b, 1975, 1981) and Baucom (1974) who provided the foundation for the eventual establishment of Khoe as a genealogical unit. He then goes on to present his own goals and methodology, including a presentation of the languages which provided his corpus of phonological and morphological material. He includes published data from two Khoekhoe varieties, Nama (Beach 1938, Hagman 1977, Rust 1969, Krönlein 1889) and !Ora (Meinhof 1930), as well as Köhler's (1981) material on the Kalahari Khoe language, Khwe (spelled Kxoe throughout the work). The remainder of his corpus is constituted by evidence extracted from 15 Kalahari Khoe varieties which he collected during a comprehensive survey of Botswanan Khoe languages between 1983 and 1984 (cf. Vossen 1997: 71). These languages, according to Vossen's comparative analysis, belong to four distinct dialect clusters: Kxoe (ǁAni, Buga, Glanda), NARO-GǁANA (ǁlana, ǁlui, †Haba, Naro), SHUA (Ts'ixa, Danisi, Deti, Cara, ǁXaise) and TSHWA (Cua, Kua, Tsua). While it would exceed the scope of this review to provide background information on each of Vossen's varieties, it is important to present a brief note on his Tshwa varieties (cf. Vossen 1997: 83-84). 'Cua' data is limited and comes from an elderly speaker who, back then, resided in the village Setekwane near Serowe. Both 'Kua' and 'Tsua'

data was collected at Malatswae. The ‘Kua’ speaker resided in Letlhakane before moving to Malatswae. While all three varieties share some phonological and morphological resemblances with Tjwao, none of them seems to provide a complete match for the data from western Zimbabwe which is presented in this work.

The second section of Vossen’s work is dedicated to the description of a predefined set of phonological and morphological features of each of the varieties listed above, which are compared and reconstructed to different proto stages. The phonological issues described by Vossen are phoneme inventory (consonants, vowels) and prosody (phonotactic structure, tone). The morphological categories studied are person, gender, number, morphological tone classes, verbal derivation, possessive and interrogative pronouns/affixes, tense, and aspect. The following is a brief description of his main findings relevant to the present work.

Discussing the phoneme inventories of the Khoe family, Vossen shows that while all languages have comparatively large click sounds, some languages of the Kalahari branch, namely, the dialect clusters of SHUA and TSHWA, have reduced inventories due to click loss. In addition, all languages have supra-segmental or prosodic tools such as tone at the lexical and grammatical level. In the domain of nominal morphology, all languages that belong to the Khoe phylum have a complex pronominal system which distinguishes three persons (first, second, third), three grammatical genders (common, feminine, masculine), and three numbers (singular, dual, plural). These categories are conveyed by portmanteau morphemes known in the literature as PGN (person-gender-number) enclitics.

Regarding the verbal morphology, Khoe languages are characterised by a plethora of derivational suffixes. Vossen (1997: 271) presents an overview of the derivational verb extensions found in his data and demonstrates that a subset (causative, reflexive, reciprocal, dative/benefactive, repetitive) is found in all languages of the family. The Khoe languages in his corpus further distinguish between several tense and aspect categories and often have multiple ways to express verbal negation. His findings also suggest that syntactically, in Khoe the simple word order is Subject-Object-Verb (SOV). Additionally, all languages have nominal modifiers, that is, adjectives, demonstratives, and possessives which precede the noun that they are modifying.

The fourth section in Vossen's monograph presents a historical classification of the Khoe languages. Vossen argues that there is a split between Khoekhoe and Kalahari Khoe and, in addition, the Kalahari Khoe is further divided into two branches, namely, Eastern (SHUA, TSHWA) and Western (KXOE, NARO-G|ANA). This subclassification is still widely accepted by linguists studying languages of the Khoe phylum (see, Güldemann and Vossen 2000, Güldemann 2014), and formed the basis for the classification of Tjwao provided in Chapter One of the current study.

Drawing on the evidence from his previous work, Vossen (1997) also published multiple studies on selected features of the Khoe language family, as well as on matters relating to reconstruction and subclassification. A summary of Vossen (1997) has been provided in two articles on the genealogical relationship between languages (Vossen 1997, 1998). Classificatory problems arising from irregular correspondences between languages, particularly with regards to the SHUA variety, Ts'ixa, and the TSHWA variety, Kua, are elaborated on in Vossen (1991, 2010). Vossen (1992) focuses on aspects in phonetics and phonology that include the status of the consonant /q/ in Khoe. In addition, he discusses the mechanisms and classificatory importance of click loss in languages of the Kalahari Khoe subgroup (Traill and Vossen 1997, Vossen 2005). Vossen's studies on click loss are of relevance to the present study, as the phenomenon can also be observed in Tjwao. Selective treatments of morphological features concern the reconstruction of the PGN system (Vossen 1994), grammaticalisation of a noun *!'o 'place' (Vossen 1998), verbal negation (Vossen 2006), the verbal linker or "juncture morpheme" which links a subset of grammatical suffixes to the verb root (Vossen 2010a), and possessive constructions (Vossen 2010b).

In 2013, Vossen edited a major volume on the 'Khoisan' (or "Khoesan") languages, which also includes multiple chapters on languages belonging to the Khoe family. This study deals with genetic relationships, typology, and language contact, as well as descriptions of phonetics and phonology, tonology, morphology, and syntax of individual languages. All chapters are authored by experts in their respective fields and provide a state-of-the-art overview of what was then known about Southern and Eastern African 'Khoisan' languages.

In the same volume, Haacke discusses phonetics and phonology (Haacke 2013a), morphology (Haacke 2013b, 2013c) and syntax (Haacke 2013d) of Nama-Damara (or Standard Namibian Khoekhoe) and the extinct South African Khoekhoe variety, !Ora. He bases his description of

!Ora on the studies by Wuras (1920), Meinhof (1930) and Maingard (1962). In addition, he provides a thorough overview of tonology in Nama-Damara (Haacke 2013e), which is of particular comparative interest, as this Khoekhoe variety is the only Khoe language which was documented as having a four-tone system (cf. also Beach 1938). Based on his documentation project, in the same volume Widlok describes another Khoekhoe variety, the Hailom language from northern Namibia, focusing on phonetics and phonology (Widlok 2013a), morphology (Widlok 2013b) and syntax (Widlok 2013c).

The Kalahari Khoe data presented in Vossen's volume mostly comes from Vossen himself and may be considered an extended version of the material presented in his 1997 work. He discusses phonetics and phonology of KXOE (Vossen 2013a), SHUA (Vossen 2013b) and TSHWA (Vossen 2013c), the tonology of the KXOE varieties, Khwe and !Ani (Vossen 2013d), of the SHUA varieties, Cara and Deti (Vossen 2013e), and of TSHWA (Vossen 2013f), the morphology of G!ANA (Vossen 2013g), SHUA (Vossen 2013h) and TSHWA (Vossen 2013i), as well as the syntax of SHUA (Vossen 2013j) and TSHWA (2013k). More recent evidence reflecting research on languages belonging to the Western Kalahari Khoe subgroup comes from the following authors in the same volume: Nakagawa's contributions cover phonetics and phonology of G!ANA (Nakagawa 2013a), as well as the tonology (Nakagawa 2013b) and syntax (Nakagawa 2013c) of G!ui. Visser addresses all aspects of the Naro language, namely, phonetics and phonology (Visser 2013a), tonology (Visser 2013b), morphology (Visser 2013c) and syntax (Visser 2013d). Finally, languages of the KXOE subgroup, especially the Khwe variety from the West Caprivi, are discussed in the morphology chapter by Schladt and Vossen (2013), as well as in Kilian-Hatz's (2013) chapter on Khwe syntax.

Apart from the major works edited by Vossen cited above, there is a study on tonology in Proto-Khoe by Elderkin (2004, 2008, 2013). Based on synchronic data from Khoekhoe and the Western Kalahari Khoe languages, namely, Naro, G!ui and Khwe, Elderkin (Ibid.) Elderkin proposes to reconstruct a two-tone system for Proto-Khoe from which the four-tone (Khoekhoe) and three-tone (Kalahari Khoe) systems of the modern languages can be derived through depressor effects of voiced and aspirated consonants. In addition to his works on tone, Elderkin has published on vowels in Proto-Khoe (2016), as well as on the reconstruction of plant and animal terminology (Elderkin 2017).

The analysis of click sounds has always been problematic in the Southern African Khoisan languages in general. Two analytical models have been proposed. Following the work of Traill (1986), scholars such as Güldemann (2001), Nakagawa (2006) and Güldemann and Nakagawa (2018) have proposed to treat complex consonants as clusters consisting of consonant onset and consonant offset, both of which constitute separate phonemic entities. Conversely, Miller *et al.* (2007, 2009) argue for the analysis of complex consonants as units. The supporters of cluster analysis suggest that the treatment of certain types of complex segments as stop clusters reduces the number of distinctive sounds found in Khoisan consonant phoneme inventories, while the inexhaustible consonant inventory size is not problematic for scholars in favour of unit analysis. Several scholars working on Kalahari Khoe have favoured the cluster analysis (cf. Nakagawa 2006, Fehn 2016, Matthes 2017), and the present study adopts it as well.

A brief overview of research on outside-relations of the Khoe family is also important. Although a macro “Khoisan” language family as suggested by Greenberg (1963), Ehret (1986) and Honken (1977) is now mostly rejected (cf. Güldemann 2014 for a discussion), the possibility of genealogical relationships between the Khoe family and other click languages of Eastern and Southern Africa remains a topic of scholarly research. A relationship between Khoe and Kwadi - an extinct language of Southwestern Angola was first suggested by Westphal (1965, 1971) and Köhler (1981), and has more recently been further pursued by Güldemann (2004) who, based on the Kwadi data collected by Westphal (1971, ms), reconstructs a minimal-augmented pronoun system for a macro-unit which he terms, Khoe-Kwadi. Further (lexical) data for a genealogical relationship between Khoe and Kwadi is presented in Güldemann and Elderkin (2010) and Fehn (forthcoming). Another possible candidate for a distant relative to the Khoe family is the Tanzanian isolate, Sandawe. This hypothesis was first mentioned by Köhler (1973/4), and has since been pursued by Elderkin (1986, 1989). While a relationship with Sandawe would support an eastern African origin of the Khoe family (cf. Güldemann 2008 for a discussion), the evidence produced so far is not convincing and “lacks substantiated historical reconstructions” (Fehn 2019 p.c.).

2.2 Khoekhoe

This section explores literature on the Khoekhoe branch. As the present work is concerned with a Kalahari Khoe language, this section does not intend to give a detailed overview but focuses on studies whose contents and scope may be considered of importance beyond the Khoekhoe

subgroup of Khoe. While historical accounts leave little doubt about the former dialectal diversity of the Khoekhoe branch, the only variety which is vibrant today is Nama-Damara (or Standard Namibian Khoekhoe), along with the closely related Northern Khoekhoe languages, Hailom and †Akhoe, and the Richtersveldt variety spoken in South Africa. In consequence, the up-to-date linguistic documentation available is mostly restricted to these languages, with !Ora – a Khoekhoe language that became non-existent during the first half of the 20th Century – forming a notable exception.

A restricted corpus of !Ora data suitable for modern linguistic analysis is still available from various sources mainly published in the 20th Century. Lexical data and some grammatical information can be found in Wuras (1920), Meinhof (1930) and Engelbrecht (1928), while additional texts and grammatical sketches are available in Engelbrecht (1936) and Maingard (1962). du Plessis's (2019) study of !Ora (termed Kora throughout the work) can be considered the most up-to-date and the most comprehensive grammatical description. The introductory chapter of the book provides information on the Khoe language family and the position of !Ora within its Khoekhoe branch, as well as a comprehensive review of published and unpublished works available on the language and the speakers the author worked with. The study contains a thorough description of the phoneme inventory, phonotactic structure and tonology of !Ora, as well as a grammatical treatment of morphology and syntax. The work concludes with a rich text corpus containing personal histories, historical accounts as well as folktales and songs, and is supplemented by a dictionary and a glossary of personal names, as well as animal and plant terminology. Additionally, du Plessis (2019: 26) provides a detailed summary of the differences between Kalahari Khoe and Khoekhoe, among which the pronominal system stands out as the most prominent feature.

Among the works on Khoekhoe, it is Beach's (1938) seminal treatment on the phonetics, phonology and tonology of Nama and !Ora (including Griqua) that had the most significant impact on the analysis of Khoe root phonotactics. Beach finds that in Nama, only three strong root patterns occur: CVV, CVN and CVCV.²⁶ He then hypothesises that CVV and CVN syllable structures have been derived from CVCV by means of consonant or vowel deletion. Beach also formulates rules for the consonants allowed in consonant onset and consonant

²⁶ CVC = consonant + vowel + consonant, CVN = consonant + vowel + nasal, and CVCV = consonant + vowel + consonant + vowel

offset. He notes that clicks are only accepted in consonant onset. Following his interpretation of Khoekhoe tone as contour, rather than as a register system, he identifies the syllable (and not the mora) as the tone-bearing unit. As a result, he rejects the analysis of vowel sequences as diphthongs. Beach further identifies similar phoneme inventories for Nama and !Ora, but postulates the additional existence of ejective stops and clicks in !Ora.

Although Nama-Damara (or Standard Namibian Khoekhoe) is still the subject of numerous studies as illustrated below, the relevant reference grammar remains Hagman (1977). While his phonological analysis mostly agrees with Beach (1938), he differs from his predecessor in analysing tone as register, and hence vowel sequences as diphthongs. In this framework, the tone-bearing unit becomes the mora (not the syllable), which is still the dominant view in Khoe suprasegmental studies (see also Vossen 1997). Hagman's study presents a detailed phonology section, which is followed by nine chapters dealing with various topics in morphosyntax, including verb-phrase, noun-phrase, and sentence structure. The work further includes a sample text and an index of grammatical elements.

Finally, Haacke's studies have substantially contributed to the study of Nama-Damara tonology and grammar. In his M.A. thesis, Haacke (1976) provides a comprehensive study of the noun-phrase, while his PhD thesis deals with the tone system and morpho-tonological processes (Haacke 1999). Apart from numerous articles such as phonetics and phonology (Haacke 2013a), morphology (Haacke 2013b, 2013c), syntax (Haacke 2013d) and tonology (Haacke 2013e), Haacke has produced a dictionary (Haacke and Eiseb 2002) which also includes dialectal information, as well as references to Hailom and †Akhoe.

2.3 Kalahari Khoe Branch

2.3.1 Western Kalahari Khoe

The most comprehensive study on the phonetics and phonology of any Kalahari Khoe language is Nakagawa's (2006) work on Glui. Following Traill (1986), Nakagawa (2006) adopts the term "accompaniment" in his study of click sounds and notes that, unlike "efflux", it is not skewed towards the unit analysis. Since the present dissertation accepts the cluster analysis, the term 'click accompaniment' is used after Traill (1985: 99-100) and Nakagawa (2006: 138). An important contribution of Nakagawa's work lies in the establishment of a phonemic difference between complex ejective click sounds and click clusters with a glottal stop. Nakagawa (2006)

notes that this click pair matches the formerly established dichotomy between a complex click aspirate and a click cluster with a glottal fricative offset, which is known as “delayed aspiration”. Nakagawa (2006) observes that the click cluster with a glottal stop is characterised by pre-nasalisation when a vowel precedes the click. Nakagawa’s findings have been crucial in the revision of the integrated Khoe consonant chart presented by Güldemann (2001), that is, they led to the inclusion of some click sounds which Güldemann (2001) did not consider in his study.

Kilian-Hatz (2008) provides a comprehensive description of the Western Kalahari Khoe language, Khwe, focusing on the !Xom dialect spoken in the West Caprivi. Her grammar discusses the domains of phonology, morphology, and syntax, but does not provide an in-depth analysis of the language’s consonant inventory. Nevertheless, the phonology section of her work is of importance for the present study, which largely follows the orthographic conventions adhered to for Khwe. Besides discussing important aspects of the verb phrase, the noun-phrase and the pronominal system which are of relevance for both the study of Tjwao and of Khoe-Kwadi languages in general, Kilian-Hatz provides a comprehensive description of the juncture morpheme in Khwe, as well as its function. Following Köhler (1981), she notes that Khwe has two juncture morphemes, namely, ‘juncture I’ which links non-past markers to the verb stem, and ‘juncture II’ occurring with past tense and derivational verb suffixes. Contrary to what prevails in Khwe, only ‘juncture II’ has been identified in other Kalahari Khoe languages (cf. Vossen 1997, 2013, Fehn 2016, Chebanne and Collins 2016).

Although the earliest works analysing click loss date back to 1907 (cf. Traill and Vossen 1997: 25), the systematic analysis of click loss only advanced in the 1980s. By comparing the phoneme inventories of Western Kalahari Khoe and Eastern Kalahari Khoe, it has been shown that click loss has mostly affected varieties of the Eastern Kalahari branch (Traill and Vossen 1997). Traill (1986) was the first scholar to study click loss systematically and noted that all Kalahari Khoe languages except for Naro and !Gui (in the Western Kalahari Khoe branch) are facing a reduction of click inventories. He uses this finding to propose his west-east continuum hypothesis that purports that the languages of the Western branch are more conservative compared to those in the Eastern branch. Traill and Vossen (1997) follow up on Traill’s (1986) research on click loss in Khoe languages and note that it is the palatal and the alveolar clicks that have been substituted by non-click sounds. Traill and Vossen (1997) attribute the loss of

click sounds in Khoe to its contact with Bantu languages and “click weakening”²⁷. The works that respond to Traill (1986) and Traill and Vossen (1997) show multiple examples in which the alveolar click has been replaced by non-click velar sounds, while the palatal click has been replaced by palatal or palatalised sounds (c.f. Chebanne 2000, 2008, Fehn 2016, Mathes 2015).

2.3.2 Eastern Kalahari Khoe

To this date, the varieties of the Eastern Kalahari Khoe branch have not been properly documented and they have been neglected for a long time. Presently, there is a small but growing corpus for some Eastern Kalahari Khoe languages (Vossen 1997, Chebanne 2014, Chebanne and Collins 2016). Following Vossen (1997) and Chebanne (2014), Chebanne and Collins (2016) divide Eastern Kalahari Khoe into two branches, Shua and Tshwa. However, there are problems linking the Tshwa varieties (cf. Cua and Kua) documented by Chebanne (2014) and Chebanne and Collins (2017) to those described by Vossen under the same name (1997). Vossen and Chebanne recorded the varieties in different geographical locations, and it appears that some are referred to by the same name, even though they differ linguistically. Güldemann (2014: 6) notes that the term ‘Kua’ is used as a term of self-reference by speakers of several speech varieties, including G|ui-G|ana, Tshwa and Shua. While these varieties have been referred to as Kua, the term Kua is a derogatory term meaning ‘slave, servant or San person’ (Güldemann, *Ibid.*) Therefore, it may be assumed that the term is an external imposition that some Kalahari Khoe communities have come to accept.

The most recent grammatical description of another Kalahari Khoe language, Ts’ixa, comes from Fehn (2016). In her grammar, she discusses important phonological issues such as click loss which has affected many Kalahari Khoe languages, as well as tonological aspects which include morpho-tonological phenomena such as “flip-flop” (cf. also Kilian-Hatz 2008 on Khwe). On the aspects of the noun-phrase, Fehn (2016) observes that most nouns are marked for person, gender and number by means of clitics referred to as (PGN) markers. However, this is not the case with Tjwao, where nouns are not commonly marked by PGNs (cf. Fehn and Phiri 2017). Fehn discusses the origin of certain TAM suffixes and derivational suffixes in Ts’ixa. Her study contributes to the ongoing debate on the multiverb constructions featuring the juncture morpheme. To date there is no consensus among scholars regarding this construction. It has been termed a serial verb construction (SVC) (Kilian-Hatz 2008, Haacke

²⁷ This term is used by Traill and Vossen (1997: 36) to refer to the modification of the abrupt influxes.

2014), verb compounding (Nakagawa 2006, Rapold 2014) and juncture-verb construction (Fehn 2016).

In studying several Eastern Kalahari Khoe varieties (Kua, Cua and Tsua), Chebanne (2014) pays attention to what the languages of this branch have lost phonologically and morpho-syntactically. Following Trail and Vossen (1997), he adopts a comparative approach in arguing the case of click loss. Phonologically, he observes that some click sounds are missing or modified in some cognates in the languages of the Eastern Kalahari branch. Chebanne's (2014) study also confirms that the lateral and dental clicks are the most retained clicks in Eastern Kalahari Khoe languages. While Chebanne (Ibid. 9) claims that the languages of the Eastern Kalahari branch make a distinction between regular and delayed aspiration. This claim does not hold for Tjwao, and no Shua dialect has been found to display this contrast either (cf. Fehn 2018). In addition to his phonological description, Chebanne further notes that there is an erosion of PGNs in the languages of the Eastern Kalahari Khoe branch. Although Kua, Tsua and Cua varieties share some phonological and morphological resemblances with Tjwao, for the present study, none of them seems to provide a complete match for the data.

Apart from the work by Chebanne (2014) on the three Eastern Kalahari varieties, Mathes (2015) and Phiri (2015) have also conducted some research on Tsua and Tjwao. Based on synchronic data, Mathes discusses the tonal system of Tsua, while Phiri discusses the phoneme inventory of Tjwao. According to Mathes (2015: 68), Tsua has six contractive tonal melodies and exhibits an extreme tonal depression. The study argues that voicing causes tonal depression in Tsua, targeting the root-initial tones in the High-Low and High-Medium tones classes. My master's thesis (Phiri 2015) is the only existing work that focuses exclusively on the phonology of Tjwao. The study identifies and characterises vowel and consonant phonemes using the minimal pairs and near minimal pairs tests. Although I examine the phoneme inventory of the language, I did not address some of the important aspects regarding the phonetic analysis of the phonemes in Tjwao, that is, the distinction that exists between ejective and glottalised click sounds, as well as two types of click sounds involving nasalisation. Such an analysis has been carried out for other languages of the Kalahari Khoe branch, specifically, Glui (Nakagawa 2006), Ts'ixa (Fehn 2016) and Tsua (Mathes 2015).

An investigation of nominal marking in the Eastern Kalahari Khoe varieties is offered by Fehn and Phiri (2017). Their comparative study of nominal marking systems within Eastern Kalahari

Khoe suggests that Tjwao is close to the Botswanan dialects, Hiechware (Dornan 1917) and !Gabak'e (Westphal 1961), which may form a dialect cluster tentatively labelled 'Northern Tshwa'. Fehn and Phiri (2017) note that unlike in Khoekhoe, marking of nouns with the PGNs of the third person is not obligatory and only appears with proper names and certain [+human] nouns. They additionally observe that the pronoun bases for the first and second do not exist in Northern Tshwa varieties, as well as the dichotomy concerning inclusive and exclusive pronouns of the first-person plural. This is a marked difference from previously studied varieties that are considered to be part of the Tshwa dialect cluster, namely, Cua (Chebanne 2014, 2015) and Tsua (Chebanne and Mathes 2013).

Fehn and Phiri (2017) further provide a synchronic analysis of Tjwao grammar which is further developed in this dissertation: these relate to the co-occurrence of the first-person singular forms *tire* and *ti* in the nominative series, and to a possible topic construction that features a nominal referent that is followed by a co-referential pronoun. Additionally, Fehn and Phiri (2017) discuss another construction in Tjwao where the co-referential pronoun lost its original pronominal meaning and grammaticalised into a mere agreement marker. Consequently, they suggest that the nominal marking system found in some Khoe languages could have arisen from a construction like the one found in Tjwao. Further, the pronominal base as evidenced in Tsi'ixa could have been lost, leading to the gender-number suffix attaching directly to the noun (Fehn 2016, Fehn and Phiri 2017).

2.4 Review of Grammaticalisation in Kalahari Khoe

The analysis of the origin of the juncture morpheme has always been problematic. Following Köhler's (1981) investigation into Kxoe (Khwe), scholars working on Kalahari Khoe languages have studied the juncture morpheme to better understand this grammatical element, that is, its origin, function, and the constructions it appears in. Heine (1986) and Elderkin (1986) have put forward two hypotheses in respect to the origin of the juncture morpheme.

According to Heine (1986: 13), the juncture morpheme “*ʔa*” is “a grammaticalised copula” which is still found in most Khoe languages. In support of this hypothesis, he cites one sentence from Meinhof's (1930) description of !Ora. In !Ora, the copula served as the nominaliser of the preceding verb and was followed by an auxiliary verb, resulting in the structure: *verb- 'a- PGN-AUX* (Heine 1986: 13-14). It was at this stage that the grammaticalisation process ended in the Khoekhoe branch, while it further advanced in the Kalahari Khoe branch. The

continuation of grammaticalisation in the Kalahari Khoe branch is suggested to have triggered the disappearance of the PGN marker while the copula developed into a juncture morpheme. The auxiliary verb, which was a full verb, developed to a TAM marker. Heine's hypothesis has been challenged by Rapold (2014: 165) who argues that there is only one instance of the initial nominalising function which has been found for !Ora, and its interpretation is questionable.

Contrary to Heine (1986), Elderkin (1986) reconstructs the juncture morpheme as having evolved from the conjunction *ʔa* joining two verbs, specifically, the main verb and the auxiliary verb. This conjunction supposedly forms a phonological lexeme with the previous verb root. He postulates that the conjunction of the form *ʔa* is absent in contemporary Khoe languages (cf. Vossen 2010: 47). This is contradicted by Güldemann and Fehn (2014) who, using recent data from Naro, Ts'ixa and Shua, demonstrate that *ʔa* still exists as a predicate coordinator in the Kalahari Khoe branch.²⁸ It can be argued that Elderkin (1986) postulated this purely on theoretical grounds, without concrete synchronic evidence of this form.

Vossen (1998) deals with the grammaticalisation of the proto-Khoe noun **!o* "place". Drawing heavily on Köhler's (1981) work, Vossen describes the reflex *'o*, focusing mainly on its function and meaning in Kxoe (Khwe). Parallel to Kxoe, the grammatical element *'o* in Kalahari Khoe languages can appear both before its host as a "proclitic" and after its host as an "enclitic". It has various functions such as privative prefix, verbal extension, formative to create numeral adverbs, and locative marker. Vossen notes that no reflex of *'o* appears in the languages of the Khoekhoe branch.

Kilian-Hatz (2002) discusses the three verbs: *te* 'sit', *n#u* 'stand', and *loe* 'lie' in the Western Kalahari Khoe language Kxoe (Khwe). She demonstrates how the grammaticalisation of these verbal lexemes into different tense/aspect markers is directly linked to the entire Kxoe verbal system. The following grammaticalisation path has been suggested: "main verb > copula (auxiliary) > aspectual auxiliary > aspectual suffix" (Newman 2002: xi). Noteworthy are the variations that occur between the posture verbs: for instance, the verb 'stand' developed into two grammatical functions, that is, a marker of present tense and a marker of recent past, the

²⁸ Whether or not the juncture morpheme should be reconstructed to a conjunction is still debated (Güldemann and Fehn, in preparation).

verb ‘stand’ has grammaticalised into a hodiernal past suffix and the verb ‘sit down’ has evolved into a hesternal past tense marker.

Moreover, Kilian-Hatz (2006) discusses the grammaticalisation of the lexeme *yaa* ‘come’ to a proximative marker in Kxoe. While the verb is still used as a full verb to indicate movement towards a goal, it is also used to express that an action has not yet been performed, that is, ‘be about’. She observes that the grammaticalised form is phonetically reduced and subsequently appears as monomoraic, that is, *ya*. When *ya* is used with an inanimate actor in Khwe it clearly marks proximative, and can, therefore, not have its own intention or volition.

Finally, Kilian-Hatz (2008) suggests the development path which allows her to treat the various morphemes of the form *a* or *ʔa* in Kxoe as historically related. That is to say, *a* or *ʔa* functions as a focus marker (*ʔa*), a postposition predominantly marking temporal relations which is glossed as oblique (*ʔa*), a genitive marker (*-a*), and the copula/presentative (*ʔa*) (Ibid. 55). This suggested development shows that all grammatical formatives of the form *a* or *ʔa* in Khwe go back to a focus construction involving the copula / presentative (Kilian-Hatz 2008: 58).

Vossen (1997, 2010), Kilian-Hatz (2008), Visser (2010), Rapold (2014), Fehn (2016) and Kuteva *et al.* (2019) discuss the origin of the morpheme *-ma*. They broadly agree that historically, the original lexical source of the grammatical morpheme is the verb *maa* ‘give’, which is still used in most languages of the Kalahari Khoe branch. The grammaticalised morpheme is attached to the main via a juncture morpheme. It is assumed that the appearance of the juncture morpheme is indicative of the verbal origin of these suffixes (Vossen (2010: 53).

Vossen (1997, 2010), Kilian-Hatz (2008), Rapold (2014), Fehn (2016) and Kuteva *et al.* (2019) investigate the grammaticalisation of the morpheme *-xu*. They observe that the lexical source of *-xu* is the verb *xuu* ‘to leave, abandon’. This development is widespread throughout the languages of the Kalahari Khoe branch (Vossen 2010: 53) and has also been postulated for in Tjwao (cf. Kuteva *et al.* 2019: 253). The lexical source of the grammatical morpheme is still preserved as a full verb in most Kalahari Khoe languages. Analogous to the benefactive derivational suffix discussed above, the completive suffix is also attached to the main verb via a juncture morpheme. This presence of a juncture suggests in turn that the suffix has a verbal origin.

Nakagawa (2016) investigates the historical progression of nine aspect markers attested in G!ui. His study shows that seven aspect markers are all historically related to posture verbs and/or the verb ‘exist’. The original source of a further aspect marker, *wa*, is a locative postposition. Finally, the source of the progressive marker, *kua*, is not clear.

Andrason and Phiri (2018) are the first to analyse the Tjwao verbal system. Their study discusses two tense-aspect-mood (TAM) suffixes in Tjwao, that is, *hĩ* and *ha*. They suggest that the two grammatical morphemes are derived from verbs. The original lexical sources still exist as full verbs in the language. The suffix *-ha* is derived from the verb *hãã* ‘to be there, to exist’, and *-hĩ* goes back to the verb *hĩĩ* ‘to do, to make’. The grammatical morphemes are linked to the preceding verb via a juncture morpheme. The authors’ findings show that the grammaticalisation paths attested in Tjwao resemble those suggested for other Kalahari Khoe languages of both the Western and the Eastern sub-branches (Vossen 1997, 2013, Kilian-Hatz 2008, Rapold 2014, Fehn 2016).

Fehn (2019) revisits and complements Vossen’s (1997) reconstructions of tense and aspect for the Khoe family using with recent data from previously undocumented languages of the language phylum and southern African ‘Khoisan’ as a typological unit. She proposes development paths for different TAM suffixes and illustrates how these paths are shared across Khoe and across languages in general. According to Fehn (2019), most TAM suffixes in Khoe can be traced back to verbal sources. She convincingly demonstrates that the original lexical sources of these suffixes are preserved in most Khoe languages, often being used as full verbs. It is vital to remember that languages of the Khoe family show distinct stages of grammaticalisation. While the TAM suffixes are barely grammaticalised in some languages, they are further developed in others, losing certain phonetic features such as second vowels and nasalisation.

CHAPTER THREE: RESEARCH METHODOLOGY AND THEORETICAL FRAMEWORK

This chapter has two major aims. Firstly, it presents the methods used in gathering data. Secondly, it discusses the theoretical frameworks used in describing and analysing data.

3.1 Research Methodology

This section examines the methodological issues and techniques associated with the sources of linguistic evidence employed in the present research. Section 3.1.1 centres the discussion on qualitative research and justifies why a qualitative approach was chosen rather than a quantitative one. Section 3.1.2 provides a summary of where fieldwork was conducted, i.e., the geographical distribution of the Tjwao people. Section 3.1.3 focuses on the selection of participants. In section 3.1.4, various methods used for data gathering are described.

3.1.1 Qualitative Research

This study employed qualitative research techniques to gather data. In other words, data collected through elicitation, focus groups discussions and semi-structured interviews were analysed qualitatively. Qualitative research is defined by Creswell (1994: 1) as “an enquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting”. According Glesne and Peshkin (1992: 5), this method “reduces data to themes, as facts are presented in a narrative method rather than a statistical one as is usually the case with quantitative methodology”. The difference between qualitative research and quantitative research is not only in the nature of the data and the subsequent methods to gather and analyse the data, but also in their philosophical rationale. It is argued that all qualitative research methods are distinguished by their versatility, which enables researchers to continuously revise them. For example, as the gathering and analysis of data continues, they may wish to alter concepts (cf. Burgess 1985).

3.1.2 Fieldwork

To obtain data for this study, I embarked on intensive research in Tsholotsho in April, July and September 2017, October, and November 2018, and in September 2019.²⁹ In Tsholotsho, I met the Tjwao participants at Sanqinyana Village, 90 km away from Tsholotsho District centre. I also met the speakers at Sifulasengwe Village, nine kilometres away from Sanqinyana. Previous fieldtrips were made when I was the research assistant for the Living Tongues Institute for Endangered Languages and the African Languages Research Institute (University of Zimbabwe) between 2014 and 2016. During this time, I observed that most of the remaining fluent Tjwao speakers reside in Sifulasengwe and Sanqinyana.

3.1.3 Selection of Participants

One of the most fundamental tasks a qualitative researcher needs to undertake is the selection of participants. Since the remaining Tjwao speakers are fewer than ten, this had a bearing on the selection of the participants because the pool was highly limited. Five participants who are most fluent in Tjwao were selected to work with.³⁰ These participants were identified with the help of Davy Ndlovu.³¹ The targeted group for this study was the older generation because in the previous visits to the Tjwao speech communities (2013-2015)³², it was noted that the older generation between 65 years and 90 years had more knowledge of the language as compared to the younger generation (5-30 and 30-70 years) most of whom retain only a passive knowledge of the language.

One challenge I encountered was that since the speakers were old, they easily got tired, and their pronunciation was sometimes indistinct. Again, on account of their advanced ages, they underwent episodes of forgetfulness, and at times ended up using Kalanga or Ndebele to replace the words that they could not remember properly. To counter this challenge, the focus group discussion method was used. This facilitated collaboration amongst the participants who reminded one another of any words that would have been forgotten.

²⁹ See Map 1 for the geographical location of the Tjwa people in Tsholotsho District.

³⁰ In situations of extreme language endangerment, linguists do not have the luxury of selecting either a representative or an interesting sample group.

³¹ For more details about Davy Ndlovu cf. Chapter One.

³² It was during my first visits that the older generation expressed an interest in documenting their language.

All the Tjwao speakers who acted as participants are fluent in Ndebele, my mother tongue language, and that proved to be an efficient way of communicating. I obtained consent³³ from the participants to record them and to take pictures. With the help of Davy Ndlovu, before any recordings took place, the objective of the research was clarified, and permission was sought to obtain consent and cooperation from the participants before engaging with them. Davy Ndlovu also acted as an interpreter in situations involving misunderstanding between the participants and me. The five participants who provided data for the present study are presented below:³⁴

(a) *Mthandazo Khupe Vundla*

Mthandazo was born in a family of girls only and, as the only boy, he was the most favoured by his late father, the great Tjwao traditional healer, Nxaphela Vundla. Mthandazo grew up in the shadow of his great father who was well respected by many among the Tjwa and other communities, including the Ndebele and Kalanga. Mthandazo had witnessed several people coming to consult his father and getting assistance for most of their problems. Those who came to seek Nxaphela's help attest to the fact that he was a magician who performed magical acts that left people mesmerised. It is said that even white settlers who used to terrorise the San after the establishment of the Hwange National Park got lost from time to time trying to look for his homestead. Nxaphela, on recognising that Mthandazo was to carry the legacy of the family, taught him the Tjwao language and the use of traditional medicine at an early age. Mthandazo is not possessed by the spirits of his ancestors, but he uses the knowledge passed on to him by his late father.

Mthandazo is a family man with one son and two daughters and five grandchildren. He does not believe in formal education and, as such, none of his children or grandchildren attended formal school. He sees no value in the current education process which to him, is just a waste of money and time.

(b) *Ngcoli Markson Sibanda*

³³ Prior to the visit to the community, an ethical clearance was obtained from Stellenbosch University and approval to work with the community was also gained from Tsoro-o-tso Development Trust and the local government authorities.

³⁴ While consent was granted by the participants to use their pictures for illustrative purposes, they did not give consent to cross-reference their names with the data they had provided. For this reason, where necessary pseudonyms are used. In the present study, the upper-case letters identifying each dataset will be used to indicate the source of examples.

The late Ngcoli Sibanda was born in 1946. He was the only Tjwao speaker who had attained primary education up to Grade Seven. He and Mthandazo Vundla were cousins. Ngcoli was a traditional healer and, in an interview, he stated that his knowledge of traditional medicine had been passed on to him by his uncle Nxaphela Vundla. He lived several kilometres away from Sifulasengwe, but he used to spend most of his time in Sifulasengwe with his relatives.

Ngcoli had a lot of knowledge about the history of his people. In an interview, he indicated how the Tjwa people used to have traditional festivals to celebrate life, to seek guidance from the ancestors without disturbance and the abundance of food in the forest. He further stated that he was troubled by how quickly his culture was eroding because of the interference from outsiders (i.e., the Ndebele and Kalanga). According to Ngcoli, Tjwao rituals were sacred and needed to be respected. However, the arrival of the Bantu speaking people with their mixed cultures has eroded their once revered traditional activities.

(c) *Msindo Best Moyo*

The late Msindo Best Moyo lived in Sifulasengwe Village. He was married and had children. Msindo attended Wanezi Mission High School where he trained as an evangelist. He was employed by American missionaries at Pumula Mission which is ten kilometres away from his home. Unlike in the Wanezi Mission, the people at Pumula Mission did not give Msindo the respect he deserved because they knew that Msindo was Tjwa. The Kalanga and Ndebele refused to be led by a San person. Msindo had no choice but to leave the Mission and go back to his people. He started having the urge to go back into the bush.

In an interview, Msindo mentioned that among the San communities there were families that were respected for performing certain rituals. For instance, the rain-making ceremony was strictly reserved for the Tshuma family. The Vundla family were gifted traditional healers. Some families were well-known for their hunting skills and others for their craftsmanship. Unlike the well-developed communities (i.e., Ndebele and Kalanga), there was no competition for recognition among the Tjwa communities, thereby minimising conflict.

(d) *Hlabeka Tshuma*

Hlabeka Tshuma was born in Sifulasengwe. In an interview, he indicated that he does not remember his date of birth. Although he is one of the few remaining Tjwao speakers, his knowledge of the language is limited, but his input was helpful. During the interview sessions,

he agreed to work with Mthandazo Vundla. Some of his children have Tjwao names and nicknames. Hlabeka is one of the remaining male elders who is a good *iboo.ro* dancer. He has visited various places performing the *iboo.ro* dance.

(e) Mhlanganiselwa Mpofo

Mhlanganiselwa Mpofo is the only female speaker who speaks the Tjwao language fluently. Her husband died a long time ago. From her marriage, Mhlanganiselwa was blessed with children, none of whom speak the Tjwao language. She has completely lost her eyesight. She spends most of her time at her son's place in Sanqinyana Village, but sometimes she visits her home in another village which is about five kilometres away. Since she is blind, the interviews were done at her homestead. During the focus group discussion sessions, she allowed the researcher to work from her place and meet other participants there.

3.1.4 Recording Data

During the interviews, the elicitation of data and focus group discussions, the participants' responses were recorded. All audio recordings were made using an *Olympus LS P2* digital recorder, and stored as *WAV* files at *24 bits*, sample rate *44.1kHz*.³⁵ Photographs were mainly captured using a Samsung J5 android phone and saved as *JPEG* files. All the recorded data was uploaded onto an *HP CORE i5* computer and to an external hard drive (*WD Elements*), which is stored in a separate location to minimise risk of losing the files. The audio files were also shared with the supervisors to back up the data.

During the recording session, participants had a tendency of moving away from the recorder when it was placed next to them. In addressing this challenge, I adopted a method that was used by Mathes (2015), that is, the participants were asked to hold the recorder and pass it along during interviews. This method was more effective in maintaining a high quality of recording. In addition, this technique allowed the participants to relax and keep the recorder at the appropriate distance.

The recording sessions lasted approximately one hour. Most recordings were conducted inside the house where there was no background noise. Recordings made outside were done when

³⁵ The recordings made in April 2017 were made as *mp3*. However, the recordings were converted to *WAV* using the audio converter downloaded on <https://convertio.co/mp3-wav> so as to upload them on PRAAT for the phonetic analysis.

there was no wind, and in the bush, where there were no people moving around. Despite all these efforts, some of the recordings have noises of goats or chickens, sometimes a crying baby, and occasional voices of people in the background. This became a challenge during the transcription of data. All the recordings were transcribed verbatim, and the transcriptions were labelled by the names of each participant. The PRAAT³⁶ software was used to transcribe the recordings in case a detailed phonetics analysis was needed. The transcriptions are based on the orthography discussed in Chapter Four.

3.1.5 Data Collection Techniques

3.1.5.1 Elicitation

According to Chelliah (2001: 152), “elicitation is the use in language analysis of native-speaker intuitions, or translations of de-contextualised utterances from a contact language to the language being studied”. She further adds that “elicited forms provide crucial evidence necessary for the formulation of grammatical generalisations” (Chelliah. Ibid.). In this research, elicitation has been favoured because of several advantages, one of which is that it is a very fast method of collecting data. The process of elicitation involved the following two tests:

- (a) Operation test: the participants provided examples of identified phonemes, words and phrases given to them by the researcher in Ndebele.
- (b) Evaluation test: I asked the participants to determine the acceptability of a sound sequence, words, and the acceptability of sentences.

To elicit lexemes for the phonetic and phonological description, the Kalahari Basin Area (KBA)³⁷ project’s 750-wordlist was used. The list had basic vocabulary items such as body parts, household items, geographical objects, local foodstuffs, wild fruits, clothing, animals and many more.³⁸ During the elicitation of the vocabulary the participants sometimes provided full sentences instead of giving the words in isolation. This was an added advantage since it provided additional body of evidence for the morphosyntactic analysis. In addition, certain

³⁶ This is a computer software package that is used in phonetics for the scientific study of speech.

³⁷ The KBA project (2009-2012, project leader: Prof. Dr. Tom Güldemann) untangled some aspects of the complex linguistic and population history of Southern African non-Bantu languages also known as ‘Khoisan’ <https://www2.hu-berlin.de/kba/>.

³⁸ The Tjwa people are in the process of moving from a hunter-gatherer economy to an agro-based economy, and this has a bearing on the vocabulary size of an average Tjwa speaker. They are not yet exposed to the ‘modern day’ lifestyle and associated technologies, and this affects their appreciation and understanding of modern concepts.

aspects of the click accompaniments only become apparent in the environment of a preceding vowel, which is most conveniently supplied by a demonstrative in the context of a phrase. Nevertheless, the absence of citation forms which results from elicitation may present problems if the same material is to be used for the future analysis of the tones. Moreover, the basic vocabulary does not provide very much in the way of morphology. For the elicitation of the latter, structured sets of sentences prepared in advance and incorporated into a field checklist were used.

Another exercise to elicit data involved the use of the vocabulary and sentences documented in other closely related varieties, for instance, Hietchware, Kua, Tsua, Khwe and Ts'ixaxa (cf. Dornan 1917, Vossen 2013, Kilian-Hatz 2008, Fehn 2016). This process involved two kinds of tests. Firstly, sentences from the above-mentioned languages were presented. To be exact, the participants were asked to make some judgements and check the grammaticality and acceptability of such sentences in the Tjwao language. If the sentences were not acceptable and ungrammatical, the participants were asked to give the correct equivalents in Tjwao. In some cases, the participants were asked to rephrase the glossed examples in Tjwao. In addition to the structured sets of pre-prepared sentences, I elicited the “Pear Story” (www.pearstories.org).³⁹ Moreover, pictures were used to elicit interjections and onomatopoeias. The data was elicited and established in more than one session.

3.1.5.2 Semi-structured Interviews

Although most of my evidence was gathered through elicitation, I also collected data by carrying out semi-structured interviews. This approach is based on a series of open-ended, often prepared questions that direct the interview and the interviewer (Flick 2014: 197). The merits of interviews are that they are flexible, and they can be used in gathering data from illiterate participants. According to Litosseliti (2003: 18), interviews are helpful because they allow the researcher to discover and consolidate old or existing knowledge with new information. Therefore, the interviewer can obtain diverse perspectives on a similar topic in participants' own words.

³⁹ The ‘Pear Story’ is story based on a silent video clip. The participants are asked to narrate the story of the video in their own language. This text – suitably transformed into a story about a boy – was chosen specifically because it provided multiple instances where speakers were likely to use verb extensions and complex sentences.

The interviews proved that the Tjwao speakers were keen to document their language. The interviews began with small talk to establish a good relationship with the interviewees and to make them feel free and comfortable. I used this method to obtain knowledge, among many other queries, about the life experiences of people, narratives of historical events, and explanations of major social events. While such data is not directly applicable to understanding the language's grammar, it is useful as background knowledge.⁴⁰ For example, information regarding the history of the Tjwao-speaking people helped in shedding light on their encounter with the Kalanga and Ndebele people, and their subsequent abandonment of their language. This type of interviewing provided insightful information needed in understanding how the language became lost and the reasons for its recent status.

3.1.5.3 Non-participant Observation

The data obtained by means of non-participant observation was not initially meant to form part of the corpus material. As a researcher, I attended the *iboo.ro*⁴¹ ceremony out of personal interest, and as a member of Tsoro-o-tso San Development Trust. However, the ceremony provided important datasets on the history and culture of the people, which I benefited from. This technique was carried out over two days during the festival in Sifulasengwe which was organised by two non-governmental organisations. Since Tsoro-o-tso San Development Trust is also interested in preserving the language and the culture of the Tjwao people, during the ceremony I captured several pictures and videos. This provided me with an opportunity to audio-record the participants since they were singing the songs at the same time. Additionally, during the ceremony, I took notes as the participants were singing *iboo.ro* songs in Tjwao. The language is still preserved in the songs of the *iboo.ro* dance, although the speakers do not communicate using the language every day. The immersion within the cultural practices of the participants helped me in understanding their philosophy and way of life.

⁴⁰ Regarding the history and other sociolinguistics factors, the study did not limit itself to the speakers only, but it also targeted other Tjwa community elders who nevertheless retain a passive knowledge of the language, as well as the traditional leaders. The same was also done during the focus group discussions (cf. 3.1.5.4).

⁴¹ To date among the Tjwa people, the *iboo.ro* dance is significant. During the interviews the speakers indicated that in the yester years when one was seriously ill or had been bewitched, his or her relatives usually looked for a traditional healer (*labi kx'ao.tco*) for assistance. The traditional healer could either take the patient to his or her place or heal the patient at his or her homestead. The healing of the patient was done in a religious ritual process where people dance *iboo.ro*. Usually, it was not only the relatives of the sick person who danced *iboo.ro*. They invited other community members to come and participate during the healing process. Due to modernisation, things have changed. This type of dance is no longer performed during ritual ceremonies. Nowadays *iboo.ro* is performed for entertainment. Even songs which were taboo and only sung during the healing ceremony are now sung by children in public.

3.1.5.4 Focus group Discussions

Two focus group discussions were conducted during my visit to the community in 2018. The first group consisted of four Tjwao⁴² native speakers, and the purpose of the discussion was to find out what they knew about the language in general, i.e., its phonology, morphology, and syntax. Since the participants are fluent in Ndebele, the questions were put across in Ndebele and the participants were asked to respond in Tjwao. The focus group discussion helped me to clarify various unresolved problems, such as the function of the extra series of pronouns, the difference between ‘glottalised’ and ejective clicks, translating the story of the origin of fire, multiverb constructions featuring the juncture allomorph /r/, and the problem with the perfective marker whether it is /xa/ or /ha/. It was during the focus group discussion that participants were able to help one another, as this method gave them room to discuss in their language. The participants were also invited to provide oral narratives (for instance, folktales and songs). While one speaker was narrating the story in Tjwao, one of the other speakers in the group would translate the story into Ndebele. The discussion did not exceed two hours at most to ensure that the participants did not feel tired.

The other focus group consisted of the four speakers from the first group and other six older Tjwa people who retain a passive knowledge of the language. In this case, the focus group discussion was conducted on topics relating to sociolinguistics, cultural and historical issues. The participants were chosen from both genders. At some point during the focus group discussion, the six participants who are not fluent speakers felt intimidated by the other four speakers who dominated the discussion, and I was afraid that they would withhold sharing their own experiences. To counter this challenge, I made sure that the participants were comfortable by establishing a good relationship with them so that they could express their views freely without any fear. I encouraged the participants to take part in the conversation. Throughout the focus group discussion, I did not lead the discussion but limited my participation to listening.

3.1.5.5 Data from Existing Sources

In addition to data collected from the field, some data was accessed from previously obtained materials. As mentioned in Chapter Two, not much has been written on Tjwao. The previously obtained data encompasses the sociolinguistic background information and linguistic data. The

⁴² Of the four Tjwao fluent speakers who participated in the focus group, three participants were male, and one was female.

sociolinguistic background works include Hachipola (1998) who offers valuable evidence regarding the language situation in Zimbabwe. Another study is on the contemporary state of the Tjwa people and their language by Ndlovu (2017). Linguistic evidence was obtained from the orthography published by CASAS (2015), three articles by Fehn and Phiri (2017), Andrason and Phiri (2018) and Andrason, Fehn and Phiri (2020). Additionally, some examples were also extracted from my earlier works, namely, a Master's thesis by Phiri (2015) and a Tjwao lesson book by Phiri and Wills (2015).

Additionally, the present study benefited from the use of the transcriptions of data collected in 2014 in collaboration with African Languages Research Institute and the Living Tongues Institute for Endangered Languages, for a different but aligned research to the present study. The project was initiated to create a lexicographic archive to support and document the Tjwao language. The online talking dictionary that was compiled (*talkingdictionary.swarthmore.edu: 2014*) has been a useful source of data, especially on the phonetics and phonology of the language. This dictionary was compiled by the late Ngcoli Sibanda and Davy Ndlovu under my auspices. The dictionary currently has 195 entries, with 67 audio files that have served to supplement the more recently obtained recordings of lexical data.

3.2 Theoretical Frameworks

This section focuses on two theoretical frameworks employed in this dissertation. Section 3.2.1 centres the discussion on the Basic Linguistic Theory, while section 3.2.2 provides a brief overview of the grammaticalisation theory.

3.2.1 Basic Linguistic Theory

The theoretical framework used to describe the evidence collected is what Dixon (2010) terms the 'Basic Linguistic Theory' (BLT). This framework is commonly used in documenting languages that lack a systematic description. Therefore, BLT is a guide for prospective linguists who embark upon the description of a previously undocumented language.

According to Evans and Dench (2006: 3), "the job of descriptive linguistics is to describe individual languages as perceptively and rigorously as possible, with maximal accountability to a naturalistic corpus of data ideally collected within a broad program of language documentation to ensure that the full spectrum of language structures are represented".

Linguists who are interested in writing descriptive grammar primarily rely on empirical evidence so that they give a detailed analysis of the grammatical categories: their internal structure and the way they integrate into longer units, i.e., words, phrases, clauses, and sentences (cf. Dixon 2010).

Dryer (2006b: 211) states that “Basic Linguistic Theory differs from traditional grammar most strikingly in its attempt to describe each language in its own terms, rather than trying to force the language into a model based on European languages”. The activity of pre-modern linguists that used Latin grammar to describe non-European languages is completely condemned. Accordingly, the aim of descriptive linguists is to study a language and do fairness to its structure without judgment, irrespective of the systems found in other languages. (Haspelmath 2010: 345).

The central concern of descriptive linguistics is the synchronic form taken by a certain language at a given point. Generally, it is argued that linguists should first study the complete system of a language at some point in time (synchronic), and then examine how this system changes over time (diachronic). Another assumption is that descriptive works are a preliminary step in the typological stage at which the facts of individual languages are established before a comparison can take place. In other words, linguists first describe the language at a given time and in so doing avoid comparing it with other languages.

The need to differentiate descriptive theory from explanatory theory is emphasised by Dryer (2006 b), arguing that the Basic Linguistic Theory is the former rather than the latter, and thus cannot be criticised for not providing explanations of grammatical facts. In the same vein, Haspelmath (2010: 351) notes that “if descriptive theories were interpreted in the simplest terms, they could not have any explanatory function, as metalanguages for precise description”. It is argued that the explanatory approach primarily consists of formal and functional explanation, and this is diachronic (cf. Haspelmath. *Ibid.*)

Although the Basic Linguistic Theory can be used in describing a language, the approach has its shortcomings. The theory has been critiqued for claiming to be *atheoretical*.⁴³ Bach (2004: 50) and Dryer (2006b: 207) are critical of such a claim and note that no such thing as an atheoretical description exists. Rice (2006: 403) argues that grammar should be informed by a theory. This will help make it coherent and also allow questions to be examined. Additionally, the Basic Linguistic Theory has also been criticised for describing the language in its own terms.

To counter the shortcomings of the Basic Linguistic Theory, especially its lack of explanatory depths, the present thesis also employs the Grammaticalisation Theory. Although Basic Linguistic Theory is used to explain the collected data, the Grammaticalisation Theory is used to examine the development of different nominal and verbal morphemes in Tjwao.

3.2.2 Grammaticalisation Theory

The Grammaticalisation⁴⁴ Theory is concerned with regularities of grammatical change. It deals with the genesis and development of grammatical forms belonging to similar types. Heine and Kuteva (2002) assert that the primary goal of the Grammaticalisation Theory is to describe how grammatical forms and constructions arise and develop through space and time, and to explain why they are structured the way they are.

According to Hopper and Traugott (2003: 1), “grammaticalisation” refers to that part of the study of language change that is concerned with such questions as how lexical items and constructions come in certain linguistic contexts to serve grammatical functions or how grammatical items develop new grammatical functions”. Lexical items are lexemes such as, adjectives, adverbs, nouns, and verbs that carry lexical meaning or meaningful semantic content. They differ from ‘grammatical functions’ because they are mainly independent phonologically and syntactically. In contrast, words that serve ‘grammatical functions’ are determiners, auxiliaries, coordinators, complementisers, some adverbs and affixes. These

⁴³ The present study argues that the Basic Linguistic Theory is atheoretical in comparison with highly theoretical models like the generative syntax, minimalist theory and other theoretical frameworks that are heavily dependent. However, it is not atheoretical, but it is basic theoretical. This means that it has certain assumptions, and these assumptions are related to traditional grammar and descriptions.

⁴⁴ This term was first used by a French linguist Antoine Meillet who was interested in identifying how new categories and system changes arise. Even though the term was first used by Meillet, it is generally agreed that the notion of grammaticalisation has a much longer history than the term itself (cf. Traugott 2010: 269). Various scholars have put forward a multiplicity of definitions of the grammaticalisation process (c.f. Heine *et al.* 1991, Lehmann 1995, 2004, Hopper and Traugott 1993, 2003, Bybee *et al.* 1994, Croft 2010).

words are referred to as ‘grammatical’ because they depend on other words in a sentence and may be reduced phonetically. Considering the dichotomy between lexical items and grammatical items, ‘grammaticalisation’, thus, is the process of a lexeme transforming into a grammatical element.

One of the main characteristics of grammaticalisation is gradualness. Gradualness refers to the fact that most development involves (a series of) micro-changes, an issue which is sometimes overlooked in considerations of more general patterns of language change (Traugott and Trousdale 2010). While the development is sometimes understood (or at least formulated) as $A > B$, studies of gradualness in linguistic change attempt to uncover “the tiny local steps between A and B that the arrow ‘>’ encompasses” (Brinton and Traugott (2005: 150). According to Heine *et al.* (1991: 65), grammaticalisation is a gradual/continuous, not a discontinuity/dissentious process, it is neither simple nor discrete. The development therefore takes place over a long period of time in languages (cf. Heine *et al.* 1991, Hopper and Traugott 1993, 2003).

There are four mechanisms of grammaticalisation namely, context extension, semantic bleaching, decategorialisation and phonetic erosion. These are viewed “as different components of the one and same general theory [of grammaticalisation]” (Smith: 2017: 3). A review of existing literature shows that scholars describe, define, and label these mechanisms in widely varying manners.

The phenomenon of context extension refers to “the rise of new grammatical meaning when linguistic expressions are extended to new contexts” (Heine and Narrog 2010: 405). It explains how the construction is increasingly used in various contexts and how it becomes more schematic and less syntactically restricted. Semantic bleaching is also known as ‘desemanticisation’. The term refers to an actual loss of lexical meaning (Kuteva *et al.* 2019: 3-4). An illustration of semantic bleaching as presented by Heine and Narrog (2010) is the process whereby words which refer to body parts such as *head*, *back*, *face*, etc., are grammaticalised over time and reinterpreted as adpositions of location such as *behind*, *on top of*, *in front of*, etc. The original lexical meanings of the words in relation to specific body parts are bleached out, which results in the words being more grammatical. Phonetic erosion is a mechanism by which the pronunciation of the construction is greatly decreased in prominence, and much of its phonetic features may also be entirely lost. Decategorialisation also known as

morphological reduction is a mechanism by which a lexeme loses its morphosyntactic properties (cf. Heine and Narrog 2010: 405). In this way, individual lexemes start to lose certain morphosyntactic properties such as, their status as independent lexemes (cf. Smith 2017: 3).

A central hypothesis in the theory of grammaticalisation is unidirectionality. Unidirectionality means that the development does not ‘go backward’, that is, the lexical item does not lose its grammatical function that it has acquired to return entirely to its previous meaning and form (cf. Lehmann 1985, Traugott 1997, 2010, Hopper and Traugott 2003). Discussing directional development, Hopper and Traugott (2003: 7) note that “it has also emerged out of recognition that a given form typically moves from a point on the left of the cline to a point further on the right, in other words, there is a strong tendency toward unidirectionality in the history of individual forms”.

As lexical words evolve to become grammatical words, the transformation typically follows a “natural pathway” (Hopper and Traugott 2003: 6). The pathway such words follow is termed a *cline*. Hopper and Traugott (2003: 6) provide an illustration of the lexical noun *back* which represents a part of the body, yet it can stand for a spatial relationship in ‘behind/in’, and it can also become an adverb, and eventually it can become a spatial term. This development from a nominal lexeme to a grammatical element is an example of a cline (Hopper and Traugott Ibid.).

It is possible to study the notion of grammaticalisation from two viewpoints. On the one hand, one can approach it from a diachronic perspective, that is “investigating the sources of grammatical forms and the typical steps of change they undergo” (Hopper and Traugott 2003: 2). From this viewpoint, it traces the progression of a lexical item when it develops into a grammatical form, or the changes that take place when a grammatical form evolves into a more grammatical element. On the other hand, one may adopt a synchronic perspective to grammaticalisation by using it as a heuristic tool to explain the linguistic variation of forms attested in a language in a particular point in time.

Although the pervasiveness of grammaticalisation has long been known, certain scholars have challenged the theory of grammaticalisation, especially its unidirectionality principle. A few counter examples have been found to criticise unidirectionality hypothesis. (cf. Newmeyer 1998, Joseph 2001). These scholars argue that unidirectionality is not complete within the

grammaticalisation framework. Additionally, Newmeyer (2001: 188) asserts that “*there is no such thing as grammaticalisation*, at least to the degree that it can be regarded as a distinct grammatical phenomenon that requires a specific set of definitions in order to justify it”. Joseph (2001: 184) also cast doubts on grammaticalisation as a process of language development and referred to the notion as “an unnecessary elaboration”. His argument lies in that linguists can explain all of this by elementary role without postulating grammaticalisation as an additional theory.

Although the existence of the counter examples to the unidirectionality hypothesis is acknowledged (Aitchison 2001, Haspelmath 2004), “the consensus is that even though it can be violated in the presence of alternative cognitive principles, the unidirectionality principle turns out to be statistically significant and can serve as a basis on both the linguistic evolution and language structure” (Brubaker 2015: 12). Therefore, the current study takes grammaticalisation as a unidirectional process because there are no counter examples of the hypothesis encountered in Tjwao or any other Khoe-Kwadi language.

CHAPTER FOUR: SOUND SYSTEM OF TJWAO

This chapter provides a synchronic overview of Tjwao phonetics and phonology, supplemented by diachronic explanations when deemed necessary. Section 4.1 presents the orthography adopted in this study. Section 4.2 describes the vowel and consonant inventory of Tjwao. Section 4.3 discusses phonotactic features like root templates and the distribution of consonants and vowels.⁴⁵

4.1 Orthographic Conventions

This study uses a working orthography corresponding to the slightly changed orthography of Khwe (Kilian-Hatz 2003, 2008) implemented for Ts'ixa by Fehn (2016). The adopted orthography is presented in tables 2, 3 and 4 with the conventions that are analogous, and those diverging from the IPA (International Phonetic Alphabet) and the Centre for Advanced Studies of African Society (CASAS) orthography. The first draft of Tjwao orthography was approved by the Tjwao speakers under the auspices of a linguist, Anne-Maria Fehn, in March 2015. This orthography was created to help the Tjwao community develop reading materials that would be of use in the revitalisation of their language. In May 2015, linguists working on other click languages of Southern Africa organised a workshop in Bulawayo, with the Tjwao speakers. The agenda of the workshop was to develop a unified standard orthography for Tjwao languages that was going to be published by CASAS. The present study does not adopt the CASAS orthography because it does not account for all contrasts that exist in the language, i.e., the orthography is not adequate for a linguistic description. This study adopts an orthography which allows researchers to draw parallels with other published works.

4.1.1 Vowel Orthographic Representations

A comparison of vowel orthographic representations is summarised in Table 2. The sequence <ua> is included in the current orthography as it appears in the examples collected for the study, such as *kua* 'imperfective', *lua* 'red'; however, it has not been included in the CASAS orthography. The tilde <~> is used to symbolise nasalisation and it is placed over the vowel.

⁴⁵ Although tone has been described in detail for other languages of the Khoe-Kwadi family (Haacke 1999, Elderkin 1986b, Nakagawa 2006, Kilian-Hatz 2008, Mathes 2015, Fehn 2016), a thorough analysis of the tonal system of Tjwao is beyond the reach of this research and may constitute a subject for future investigation. Therefore, in the examples given in this thesis, tones are therefore not marked.

Table 2: A Comparison of the Vowel Orthographic Conventions by Fehn (2016), CASAS (2015) and the IPA

Fehn (2016)	CASAS	IPA
Oral Vowels	Short Vowels	Oral Vowels
i u e o a	i u e o a	i u e o a
Oral Vowel Sequences	Long Vowels	Long Vowels
ii uu ee oo aa	ii uu ee oo aa	i: u: e: o: a:
Oral Vowel Sequences	Diphthongs	Diphthongs
ai ae ao au oe oa ui ue ua	ai ae ao au oe oa ui ue	ai ae ao au oe oa ui ue ua
Nasal Vowel Sequences	Nasal Long Vowels	Nasal Long Vowels
ĩ ã ãã	ĩ ãã ãã	ĩ: ã: ã:
Nasal Vowel Sequences	Nasal Diphthongs	Nasal Diphthongs
ũĩ ãĩ ãĩ	ũĩ ãĩ ãĩ	ũĩ ãĩ ãĩ

4.1.2 Consonant Orthographic Representations

Consonant orthographic representations are divided into click and non-click. The conventions for non-click consonants used in this study are to some extent analogous to those underlying the CASAS orthography, with a few exceptions. Following Fehn (2016), to represent the postalveolar fricative /ʃ/, this study uses the plain palatal consonant <c> instead of CASAS <sh>. The palatal stop /ç/ is represented by <tc> instead of <tj>. The corresponding ejective /ç'/ is represented as <tc'> rather than <tj'>. Analogous to the CASAS orthography, aspiration is marked by placing <h> after the stop consonant, for instance, *thũũ* 'pain', *tshau* 'hand'. The plain voiced palatal stop /j/ represented as <ɟ> in the CASAS orthography (e.g., *ɟjore* 'bark') is replaced with <dj> (e.g., *djore* 'bark'). The velar ejective sound is represented as <kx'> instead of <k'> as represented in the CASAS orthography.⁴⁶ The present orthography also deviates from the CASAS orthography in the representation of the prenasalised voiced stop by employing prenasalised <ndj> instead of CASAS <nj>. Furthermore, operational data also included non-click consonants for which no representation was found in the CASAS

⁴⁶ This sound is not represented in Fehn's orthography because Ts'ixa has no affricated ejectives.

orthography. These include the following: <kh> *khuri* ‘pig’, <tsx> *tsxãã* ‘be tired’, <tcx> *tcxai* ‘eye’, and <w> *wuu* ‘distal demonstrative’.

In the orthographical representation of click sounds, only one difference is found: in the present work, ejective clicks are represented according to the Khwe standard, that is, as <||x’> or <|x’> instead of <click +/q/> as represented in the CASAS orthography. The aspirated lateral and dental click sounds that are absent in the CASAS orthography will be represented as follows: <||h> and <|h>. A summary of non-click and click orthographic conventions is presented in tables 3 and 4.

Table 3: Non-click Consonant Orthographic Conventions from Fehn (2016), CASAS and the IPA

Fehn (2016)	CASAS (2015)⁴⁷	IPA
Non-clicks	Non-clicks	Non-clicks
p	p	p
t	t	t
ts	ts	ts
tc	tj	tʃ
k	k	k
?	?	?
x	x	x
h	h	h
b	b	b
d	d	d
dz	dz	dz
dj	dʒ	dʒ
g	g	g
t’	t’	t’
ts’	ts’	ts’
tc’	tj’	tʃ’
kx’	k’	kqʰ’
th	th	tʰ

⁴⁷ Gaps indicate that a consonant has not been considered in the CASAS orthography.

tsh	tsh	ts ^h
kh		k ^h
tsx		tsx
tcx		tʃx
m	m	m
n	n	n
ny	ny	ɲ
ŋ	ng	ŋ
mb	mb	mb
ndz	ndz	ndz
ndj	nj	ndʒ
ng	ng	ŋg
c	sh	ʃ
r	r	r
l	l	l
s	s	s
y	y	j
w		w

Table 4: Click Consonant Orthographic Conventions from Fehn (2016), CASAS and the IPA

Fehn (2016)		CASAS (2015) ⁴⁸		IPA	
Dental	Lateral	Dental	Lateral	Dental	Lateral
g	g	g	g	g	g
l x'	l x'	l q	l q	l qx'	l qx'
l ʔ	l ʔ	l ʔ	l ʔ	l ʔ	l ʔ
l x	l x	l x	l x	l χ	l χ
l h	l h			l h	l h
n	n	n	n	n	n
n g	n g	n g	n g	ŋg	ŋg

⁴⁸ Gaps indicate that a consonant has not been considered in the CASAS orthography.

4.2 Phoneme Inventory

Tjwao contains both vocalic and consonantal phonemes. Section 4.2.1 discusses the vowel system, while section 4.2.2 focuses on Tjwao consonants.

4.2.1 Tjwao Vowel System

In Tjwao, vowels – along with nasal consonants – act as tone-bearing units. They can be split into two main categories, namely, primary, and secondary vowels. The former are oral and nasal vowels. The latter constitute oral and nasal vowel sequences. Nasalised vowels are the only non-oral phonation type found in Tjwao, whereas oral vowels mostly occur in vowel sequences. There are few cases where nasalised vowels appear in monomoraic grams.

4.2.1.1 Oral Vowels

Five oral vowels can be distinguished in Tjwao: high-front /i/, mid-front /e/, low-central /a/, mid-back /o/, and high-back /u/. Their position in the lexical roots is not restricted – vowels can appear both in both medial and final position (ex. 4.1). Like in other Kalahari Khoe languages, the five oral monophthongs are attested in both lexical roots and grammatical elements (cf. Vossen 1997: 128, 2013: 73, Nakagawa 2006: 215, Mathes 2015: 47, Fehn 2016: 40).

- (4.1) a. *i* *ʔibi* ‘egg’, *dini* ‘honey’, *kx’uni* ‘louse’, *kx’ari* ‘root’, *ts’ini* ‘smoke’
 b. *u* *ʔxuru* ‘cold’, *ʔxuri* ‘seed’, *ʔum* ‘fall asleep’, *xum* ‘soil’
 c. *e* *ʔe.be* ‘he’, *ʔxore* ‘nail/claw’, *ts’abe* ‘green’, *kare* ‘foot’, *djore* ‘bark’
 d. *o* *ʔxore* ‘nail/claw’, *karo* ‘stone’, *djore* ‘bark’, *kobo* ‘slow’
 e. *a* *ʔaba* ‘dog’, *tan* ‘stand’ *pata* ‘road’, *sam* ‘breast’, *thama* ‘grass’

Tjwao monophthongs and their phonetic properties can be mapped onto the phonetic triangle presented in Figure 2.

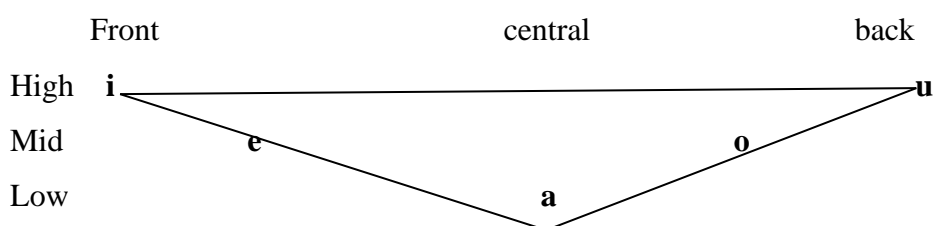


Figure 2: Tjwao Monophthongs (Oral Vowels)

In bimoraic lexical roots of the shape CVV, two vowels of the same quality appear.⁴⁹ Vowel sequencing featuring different vowel qualities is described in detail in section (4.4).

- (4.2) a. **ii** |ii ‘song’, |hii ‘rhino’, tcii ‘sick’, ii ‘this’, sii ‘to fart’
 b. **uu** |uu ‘near’, nguu ‘far away’, tuu ‘rain’, duu ‘eland’
 c. **ee** |ʔee ‘fire’, lee ‘blue wildebeest’, see ‘take’
 d. **oo** |oo ‘end’, g|oo ‘big’, kx’oo.xo ‘meat’, tsoo ‘heart’
 e. **aa** |aa ‘belly’, baa ‘father’, maa ‘head’

4.2.1.2 Nasal Vowels

In Tjwao, the three vowels /i, a, u/ are susceptible to nasalisation.⁵⁰ When nasal vowels are produced, the soft palate is lowered to open up the nasal cavity, and a nasal quality is added to the vowels.

- (4.3) a. **ĩ** t’ũĩ ‘good’ hĩĩ ‘do’, kx’ũĩ ‘liver’, tĩĩ ‘stand’, tshĩĩ ‘sneeze’
 b. **ã** kx’ãĩ ‘smell’, ʔãã ‘know’, tcãã ‘enter’, tsãã ‘cook’,
 c. **ũ** |ũã ‘child’ mũũ ‘see’, kũũ ‘go’, ʔnyũũ ‘eat’, thũũ ‘pain’

The nasalised vowels /ã/ and /ũ/ always occur in sequence (i.e., [ãũ] [ũã]). In contrast, /ĩ/ is not limited to bimoraic syllables (see the examples above) but can also occur in monomoraic grammatical syllables (i.e., CV) for example, -hĩ ‘reflexive’ and -hĩ ‘past’. The three nasal vowels, /ĩ, ã, ũ/, are mapped onto the phonetic triangle below.

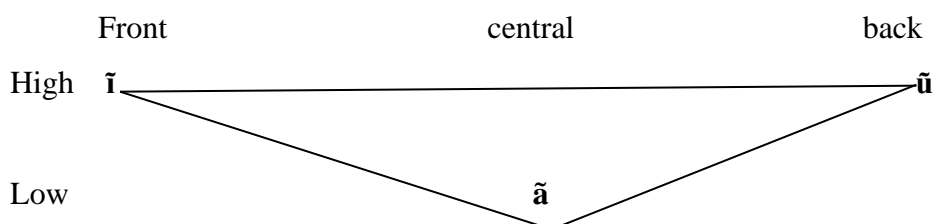


Figure 3: Tjwao Monophthongs (nasal vowels)

⁴⁹ Contrary to Phiri (2015) who observes that Tjwao has long vowels (e.g., /aa/ /oo/ /ii/), this study analyses them as a sequence of two short vowels. This is because in Khoe languages, each vowel acts as a distinct tone-bearing unit ‘TBU’ (c.f. Nakagawa 2006: 34, Fehn 2016: 46, Mathes 2015: 60). Accordingly, the mora is taken as the tone-bearing unit, and not the syllable.

⁵⁰ Vossen’s (1997: 141) comparative study observes that this type of nasal vowel system is widespread throughout the Khoe language family.

4.2.1.3 Vowel Sequences

Additional to the types of vowels described above, there are oral and nasal vowel sequences. The nine oral vowel sequences found in Tjwao are: /ai/, /ae/, /ao/, /au/, /oe/, /oa/ /ui/, /ue/ and /ua/ which is frequent in nasalised vowel sequence. As can be seen in example (4.4), only the vowels /a/, /o/ and /u/ occur as initials in a vowel sequence. The vowel sequence /ua/ is the least common. It is mostly found in the imperfective marker *kua*. The first vowel in a sequence /oa/ and /ua/ is sometimes pronounced as the glide /w/.

- (4.4)
- a. **ai** *lhai* ‘pull’, *tcxai* ‘eye’, *xai* ‘wind’, *nlgae* ‘sing’
 - b. **ae** *ʔae* ‘home’, *kae.tca* ‘to hunt’, *lx’ae* ‘to fall’
 - c. **ao** *nlgao* ‘old’ *lhao* ‘hoe’, *kx’ao* ‘neck’, *kao* ‘long’, *tsao* ‘tail’
 - d. **oe** *nlgoe* ‘moon’, *loe* ‘knee’, *djoe* ‘also’, *lʔoe* ‘full’
 - e. **oa** *nlgao* ‘stone’, *dzoa* ‘ash’, *doa* ‘kudu’ *tsxoa* ‘elephant’, *ts’oa* ‘exit’
 - f. **ui** *lui* ‘one’, *ʔui* ‘tomorrow’, *nlgui* ‘fat’, *tsui* ‘nose’, *kx’ui* ‘speak’
 - h. **ue** *ʔue* ‘break’, *xue* ‘white’, *kue* ‘river’, *kx’ue* ‘scoop’
 - i. **ua** *lua* ‘red’, *kua* ‘imperfective marker’, *ua.na* ‘to have’
 - j. **au** *ʔau* ‘fish’, *tshau* ‘hand’, *kau* ‘to remain/stay’, *kx’au* ‘taste badly’

There are three nasal vowel sequences attested: /ãĩ/, /ũã/ and /ũĩ/. Unlike /ua/, the corresponding nasal vowel sequence /ũã/ is common and occurs in many lexical roots. Analogous to /ua/ mentioned above, the nasal vowel /ũ/ in a sequence /ũã/ is sometimes pronounced as the glide /w/.

- (4.5)
- a. **ũã** *lũã* ‘child’, *lʔũã* ‘bone’, *lũã* ‘descend’, *tũã* ‘friend’ *kũã* ‘duiker’
 - b. **ãĩ** *lk’ãĩ* ‘smell’, *lãĩ* ‘buy’, *kãĩ* ‘good’, *kx’ãĩ* ‘laugh’, *gãĩ* ‘steenbok’
 - c. **ũĩ** *t’ũĩ* ‘good’, *tsũĩ* ‘small’, *kũĩ.kx’e* ‘sister’

4.2.2 Consonants

Tjwao is characterised by a fairly rich repertoire of consonants. Following Nakagawa (2006), Kilian-Hatz (2008), Mathes (2015) and Fehn (2016), in the overview of the Tjwao consonantal system, non-click and click consonant phonemes are treated separately.

4.2.2.1 Non-click Consonants

Tjwao has 39 non-click consonant sounds. Three of them, namely, /mb/, /l/ and /z/, are found only in loan words. Various types of non-click consonants are described in detail below. These are stops (including clusters), nasals (and prenasalised), fricatives, taps and liquids and glides.

(a) Stops

The stop segments of Tjwao as shown in Table 5 can be divided into voiceless (plain), voiced, voiceless ejective and voiceless aspirated stops. In addition, they can be divided into five contrastive places of articulation, namely, labial, dental, alveolar, palatal, velar and glottal.

Two voiceless labial sounds are attested: voiced /b/ and voiceless /p/. /b/ is common in lexical roots, for instance, *ɔaba* ‘dog’, *baa* ‘father’, *ɔe.be* ‘he’, *boo.ri* ‘tell’, *bee* ‘negation marker’. In contrast, the sound /p/ is only attested sparsely, for instance, *pata* ‘road’, *puri* ‘goat’, and *paa* ‘bite’. /p/ is also found in interjections, for instance, *kip kip kip* ‘sound made when calling chickens’ and onomatopoeias, for example, *lhap lhap lhap* ‘sound made when imitating walking on water’.

Three unvoiced alveolar sounds are attested: the plain alveolar stop /t/ occurs in lexical roots, such as, *tuu* ‘rain’, *tan* ‘stand’, *taa.ka* ‘blood’, in pronouns, for instance, *ti*, *tire* and *ti.a* ‘I or me’ etc., and grammatical morphemes, for instance, *ta* or *tam* ‘negation markers’, etc. The ejective /t'/ and the aspirated /th/ are also attested, for example, /t'/ *t'uu* ‘pus’, *t'ũũ* ‘good’, *t'uni* ‘to pinch’; /th/ *thũũ* ‘pain’, *thama* ‘grass’.

The voiceless alveolar-palatal sounds exist in the language: the affricate /ts/, for example, *tsui* ‘nose’, *tsãã* ‘hot’, *tsoo* ‘heart’; the ejective /ts'/, for instance, *ts'abe* ‘green’, *ts'oa* ‘exit’, *ts'oro* ‘rot’, *ts'iri* ‘to extinguish’, *ts'ãã* ‘steal’. The aspirated affricate /tsh/, for instance, *tshau* ‘hand’, *tshaa* ‘water’, *tshée* ‘day’. There are only few lexemes featuring /tsh/ as C₁. Following the general pattern, lexical roots with /tc/ are bimoraic, for example, /tc/- *tcee* ‘ear’, *tcoo* ‘skin’, *tcãã* ‘enter’, *tcum* ‘with’, *tcii* ‘call’, *tcui* ‘chase’, *tcuri* ‘year’. There are few grams that start with /tc/ that are monomoraic, such as, *tca* ‘you, masculine’.

Tjwao contains the voiceless velar stop /k/⁵¹ which is frequent and occurs in many grammatical elements, for example, *kua* ‘imperfective’, *ka* ‘anterior’, *kaa* ‘volition’, *ka* ‘oblique’, *kaxu* ‘causative’, etc. /k/ also appears in lexical roots, for instance, *kae.tca* ‘hunter’, *kare* ‘foot’, *kao* ‘long’, *kari* ‘strong/hard’, *kũũ* ‘go’ etc. This consonant is also found in loanwords from Bantu, such as, *huku* ‘chicken’, *boka* ‘thank you’. Aspirated /kh/ is attested but rare, being limited to a few words, for example, *khuri* ‘pig’, *khæ* ‘to fight’. Two alternative idiolectal variants of the velar ejective sound, which occurs in many lexical roots, are attested. This means that this sound may be realised as either [kʰ] or [kxʰ]. While most speakers affricate the ejective, few others do not, parallel to what has been observed for other Kalahari Khoe varieties from the Northern Kalahari Basin fringe (Fehn 2018). Therefore, the following realisations are possible: for instance, *kxʰui* [kʰ]/[kxʰ] ‘speak’, *kxʰaa* ‘drink’ [kʰ]/[kxʰ], *kxʰãĩ* ‘vulture’, *kxʰao* ‘neck’, *kxʰĩĩ* ‘liver’ *kxʰee* ‘cry’. In this study, the velar ejective is noted as affricated, that is, /kxʰ/, as this is pronunciation variant observed with most existing speakers. Historically, Fehn (2018) suggests that the velar ejective [kʰ] is the underlying consonant, with the shift to /kxʰ/ corresponding to a lenition process more progressed in the Central Kalahari (cf. Glui Nakagawa 2006) and Tsua (cf. Mathes 2015), which generally have [qχʰ] in cognate forms (see also ejective clicks for the word cut below). /kʰ/ or kxʰ/ also exist as a click accompaniment with both the dental click // and lateral click //l/. In addition to the variation described above, the ejective /kʰ/ is sometimes heard as lateral /klʰ/ by some speakers, for instance, *klʰĩĩ* ‘live’, *klʰee* ‘cry’. In some related dialects of Southern Tshwa, the variation between the ejective /kʰ/ and the lateral /klʰ/ is idiosyncratic as well. For example, the word for ‘neck’ in Southern Tshwa is sometimes produced as *kʰao*, *kxʰao*, or *klʰao* (Lee Pratchett p.c. 2017).

The voiced stops attested are /d/, /dz/, /g/ and /dj/. The voiced alveolar /d/ occurs in several lexical roots, such as, *dao* ‘road’, *doa* ‘kudu’, *dam* ‘tongue’, *dini* ‘honey’, *dana.tco* ‘girl’, *debee* ‘salt’. Like the consonant /d/, the voiced velar stop /g/ (cf. also footnote 51) is attested in only few lexemes, for example, *gam* ‘throw’, *garu* ‘near’, *gee* ‘cow’ *gãĩ* ‘steenbok’. The voiced alveolar-palatal affricate /dz/ is attested scarcely, being mostly found in a few nouns such as *dzini* ‘sun’, *dzira* ‘bird’, *dzoa* ‘ash’. The voiced /dj/ is found in few lexemes, for instance, *djii* ‘tree’, *djore* ‘bark’, *djoe* ‘also’, *djibe* ‘axe’. A subset of the palatal consonants in the Tjwao

⁵¹ It has been suggested that the loss of the alveolar click sound has resulted in an increased use of the velar stops /k/ and /g/, e.g., **!ũũ - kũũ* ‘go’, **g!am - gam* ‘to throw’, **!hæ - khæ* ‘to fight’, **!qxʰao - kxʰao* ‘neck’, as well as the velar nasal sound /ŋ/, e.g., **ŋ!ũũ ŋuu* ‘earth, land’ (cf. Traill 1986, Traill and Vossen 1997). As shown in the example, the non-click consonants replace the click sound in C₁ position.

phoneme inventory emerged through loss of the palatal click and its replacement by non-click palatal consonants.

The glottal stop /ʔ/, which is widespread in the languages of the Kalahari Khoe branch (cf. Vossen 1997, 2013, Nakagawa 2006, Kilian-Hatz 2008, Mathes 2015, Fehn 2016), also exists in Tjwao. The sound is produced with a closure and a sudden release of the glottis, making a sound resembling a slight cough. It is found in for example, *ʔaba* ‘dog’, *ʔe.be* ‘he’, *ʔae* ‘home’, *ʔau* ‘fish’, *ʔabo* ‘climb’. In addition, the glottal stop is extensively used in clusters with the dental click /ǀʔ/, for instance, *ǀʔũã* ‘bone’, *ǀʔee* ‘fire’ and the lateral click /ǁʔ/, for instance, *ǁʔoo* ‘die’, *ǁʔũã* ‘arm’.

It has been suggested (cf. Trail 1986, Trail and Vossen 1997) that a subset of glottal stop onsets in the languages of the Kalahari Khoe branch arose due to alveolar click loss. When a click followed by a glottal stop accompaniment is lost, the glottal stop accompaniment (cf. 4.2.2.2) is retained as are many other accompaniments. This process is also attested in Tjwao, where the alveolar click is lost while the glottal stop is retained, for example, **ǀʔãã - ʔãã* ‘to know’ (cf. Fehn 2018: 14). Tjwao also has two lexemes which have undergone lateral click loss before a glottal stop accompaniment, with the latter being retained. As the lateral click is simply dropped and not replaced by a non-click sound, this leads to a neutralisation of the contrast between /ǀʔ, ǁʔ and ʔ in C₁ position (cf. Traill and Vossen 1997, Fehn 2018).⁵² Examples for lateral click replacement (and retention) in Tjwao are provided in example (4.6) below with their proto forms.

(4.6) Proto (Vossen 1997)	Tjwao Examples
p. 508 *ǀʔae ‘home, village’	<i>ʔae</i>
p. 436 *ǁʔau ‘fish’	<i>ʔau</i>

Some stops may form clusters in Tjwao. Two such clusters are found: /tsx/ and /tcx/. The cluster /tcx/ occurs quite frequently in lexical roots, for example, *tcxai* ‘eye’, *tcxaru* ‘firewood’, *tcxuu* ‘charcoal’, *tcxuri* ‘snail’, *tcxari* ‘soft’. In contrast, the cluster /tsx/ is limited to a few lexemes,

⁵² Another intriguing case relates to the grammatical morpheme for the third person masculine plural. While Western Kalahari Khoe languages all have *-lù(à)*, Tjwao and other Eastern Kalahari Khoe varieties have *-kù(à)* (Traill and Vossen 1997: 44). The correspondence between /ǁ/ and /k/ is noteworthy; however, there is no evidence beyond this example to give a detailed analysis on this type of sound change. To date, there is no indication of the dental click loss in Tjwao.

for example, *tsxoa* ‘elephant’, *tsxia* ‘hide’, *tsxĩ̃.tco* ‘judge’. There is a contrast between aspirated non-click consonants and consonants + the affricate /x/ in Tjwao.⁵³ This distinction between /tsx/ and /tsh/ is exemplified by the near-minimal contrast between *tsxãã* ‘be tired’ and *tshaa* ‘water’.

(b) Nasals

Tjwao has four nasal sounds: labial /m/, alveolar /n/, palatal /ny/ and velar /ŋ/. The nasal consonants /n/ and /m/ are common and are found in many lexemes. For example, *tan* ‘stand’, *ɭun* ‘name’, *kx'am* ‘mouth’, *lx'an* ‘ugly’, *sam* ‘breast’, *lum* ‘cloud’, *dam* ‘tongue’.⁵⁴ In contrast, the palatal consonant /ny/ is rare and occurs only with the verb *nyũũ* ‘sit’, with the noun/verb *ɭnyũũ* ‘food/eat’, and with two grammatical elements, for instance, *-nya* ‘juncture allomorph’, and *-nya* ‘future tense’. The velar sound /ŋ/ is equally rare. It is found in *ŋaa* ‘to burn’, and *ŋũũ* ‘land’. /ŋ/ is sometimes realised as /n/, for instance, *nũũ* ‘land or earth’. However, this may be a case of idiolectal variation.⁵⁵

Additionally, three prenasalised sounds are attested: the alveolar palatal /ndz/, palatal /ndj/ and velar /ng/. These sounds appear only in bimoraic lexical roots, for example, *ndzuu* ‘black’, *ndzoro* ‘back’, *ndjuu* ‘house’, *ndjaa* ‘dance’, *ngabe* ‘giraffe’, *ngaro* ‘chamelon’, *ngabi* ‘to turn’. The prenasalised sound /mb/ is only found in loanwords from Kalanga, such as, *gomba* ‘hole’, and Afrikaans *yembe* ‘shirt’.

(c) Fricatives

There are five fricatives attested in Tjwao: /s/, /c/, /x/, /h/ and /z/. The sound /s/ appears in few lexemes, for instance, *sam* ‘breast’, *see* ‘take’, *sii* ‘arrive’, *sii* ‘to fart’, and in one grammatical morpheme, the adverbialiser *se*. It also occurs in pronouns, for example, *saba* ‘1stdual. feminine’, *saro* ‘2nd dual feminine’. The postalveolar fricative /c/ may not actually be phonemic but may constitute an allophone of /s/ in certain phonological environments, analogous to what has been described for Ts'ixa (Fehn 2016). Until more data becomes available, /s/ and /c/ will be contrasted orthographically in this work. /c/ is rare and only occurs in few lexical roots and one morpheme, for instance, /c/- *coo* ‘lung’, *coro* ‘monitor lizard’, *cori* ‘tobacco’, *ca* ‘you,

⁵³ The contrast between aspirated and affricated can be reconstructed for Proto-Kalahari Khoe, hence a levelling of this contrast would mean a levelling of distinctiveness in the lexicon.

⁵⁴ If the nasal consonants /n/ and /m/ occur in word-final position, they bear tone.

⁵⁵ Historically, the velar nasal is a phonemic nasal alveolar click [n!] substitute.

feminine’. The sound /x/ is quite common. It occurs in a number of lexemes, for instance, *xae* ‘night’, *xum* ‘sand’, *xam* ‘lion’, *xo.djoe* ‘still’, and in grammatical morphemes, for example, demonstrative *xa*. Additionally, /x/ is found in certain clusters, for instance, *tcx* - *tcxai* ‘eye’, *tsx*- *tsxãã* ‘be tired’. It is also attested with the ejective /kx/, and in conjunction with clicks. The fricative /h/ occurs in a few lexical roots, for instance, *haa* ‘come’, *hãã* ‘to exist’, *hĩĩ* ‘to do’. However, it is also found in some grammatical morphemes, for example, *ha* ‘perfect marker’, *hĩ* ‘reflexive suffix’, *hĩ* ‘past tense marker’. The sound /z/ is found sporadically in a few loanwords, such as, *mbizi* ‘zebra’.

(d) Taps and Liquids

Tjwao has one tap /r/ and one liquid sound /l/. /r/ is common in word medial position in lexical roots, for instance, *khuri* ‘pig’, *lxuru* ‘cold’, *karo* ‘rock’, and appears in the initial position in various grammatical elements, for instance, *ra*, *re*, *ro*, *rera* ‘plural markers’. /l/ is only found in loanwords, for instance, *laba* ‘read’, *kwala* ‘write’.

(e) Glides

In Tjwao, the vowels /o/ and /u/ tend to be realised as a glide /w/ before the vowel /a/ in a vowel sequence, for instance, *ua.na* - *wana* ‘have’, *uu* - *wuu* ‘far’. Another example of this is the imperfective ‘*kua*’ which is pronounced as *kwa* by some speakers. The palatal glide is sometimes pronounced before the high front vowel /i/, for instance, *ii* - *yii* ‘demonstrative’.

4.2.2.2 Click Consonants

Tjwao like, any other language of the typological unit ‘Southern African Khoisan’, is characterised by click consonants. Scholars working on Southern African Khoisan languages differ in the treatment of phonetically more elaborate click segments involving co-articulations – such as aspiration /h/, and clicks with a posterior obstruent, sometimes also called “accompaniment”, for instance, a uvular fricative /!x/. Two contrasting theoretical frameworks have been proposed by scholars to describe click sounds: cluster analysis and unit analysis.

The *cluster analysis* significantly reduces the inventory size (Traill 1986, Güldemann 2001, Nakagawa 2006). In line with Güldemann (2001), and based on Traill (1985) and Nakagawa (2006), clicks may be described as: (a) simple (plain or voiced), for example, /!, g!/, (b) complex (glottalised, aspirated – plain and voiced), for example, /!h g!h/, or (c) clusters (plain or voiced), for instance, /!x, g!x/. With clusters, the onset and the offset are analysed as two

distinct phonemes, for instance, /!x/ is analysed as a cluster consisting of /!/ and /x/. In consequence, if all distinct sounds involving [!] are counted, /!x, g!x, !x', g!x' etc./ are not treated as individual consonants, but as clusters. They are a combination of two sounds that ideally both exist independently in the language.⁵⁶

In contrast, the *unit analysis* generally leads to very large consonant inventories (Traill 1986, Güldemann 2001, Nakagawa 2006), which Miller *et al.* (2009) and Miller (2011) do not consider problematic. Contrary to the *cluster analysis*, Miller *et al.* (2009) and Miller (2011) focus on the role of the airstream mechanism in creating distinctive consonants in Southern African 'Khoisan' languages. The *unit analysis* sees each sound as a consonant on equal footing, for instance, /!/, /!h/, /!ʔ/, /!x/, /!x'/, /g!/, /g!h/, /g!x/, /g!x'/ are all considered distinct phonemes. In consequence, the above-quoted series consists of nine distinct click sounds using *unit analysis*, but only of five (/!/, /!h/, /!ʔ/, /g!/, /g!h/) in the framework of *cluster analysis*.

This study adopts the cluster analysis approach in the description of click consonants in Tjwao. This means that Tjwao has complex stop segments and stop clusters consisting of consonant onset and consonant offset. Apart from that, both complex clicks and click clusters are considered 'syllable onsets' or 'click consonants' in the present study, regardless of whether they constitute single consonants or consonant clusters.

Following the cluster analysis, Tjwao has a comparatively small click inventory. There are only two click influxes found in Tjwao: dental /!/ (e.g., *laa* 'belly', *lii* 'song', *luu* 'near', *loo* 'end'), and lateral /l/ (e.g., *lum* 'cloud', *loe* 'knee', *labo* 'sandals or shoe'). Both dental and the lateral clicks may appear with seven distinct accompaniments.⁵⁷ The voiced, nasalised and aspirated clicks are considered complex clicks, while the other four click types are considered clusters. Examples of two types of click sounds attested in Tjwao and their accompaniment are provided in example (4.7) below:

(4.7) Clicks and their Accompaniments

Dental clicks

Lateral clicks

⁵⁶ C.f. Miller (2011) for a detailed treatment of the unit analysis, and Traill (1985), Güldemann (2001) and Nakagawa (2006) for an in-depth description of the cluster analysis.

⁵⁷ The word 'accompaniment' was first used by Traill (1985: 99), replacing the term 'efflux' used by Beach (1938). The term 'accompaniment' according to Trail (*Ibid.*) means a sound/s surrounding the click but phonologically not part of the click.

- | | |
|------------------------------------|--------------------------------|
| a. <i>g ana</i> ‘leaf’ /g / | a. <i>g oo</i> ‘big’ /g / |
| b. <i>n uma</i> ‘to kiss’ /n / | b. <i>n ãã</i> ‘horn’ /n / |
| c. <i>n gee</i> ‘now’ /n g/ | c. <i>n gui</i> ‘fat’ /n g/ |
| d. <i>l hi</i> ‘rhinoceros’ /l / | d. <i>l hai</i> ‘to pull’ /l / |
| e. <i>l xam</i> ‘to urinate’ /l x/ | e. <i>l xara</i> ‘many’ /l x/ |
| f. <i>l ʔũã</i> ‘bone’ /l ʔ/ | f. <i>l ʔoo</i> ‘to die’ /l ʔ/ |
| g. <i>l x’ũã</i> ‘tonsils’ /l x’/ | g. <i>l x’ae</i> ‘meet’ /l x’/ |

Voiced clicks are comparatively rare, but are attested for both dental (e.g., *g|aro* ‘ostrich’, *g|ãã* ‘vegetables’) and lateral influxes (e.g., *g|lee* ‘female’, *g|uu* ‘chest’). In addition, nasal clicks are also found, for instance, /n|/ in *n|am-dao* ‘foot track’, *n|uma* ‘kiss’) and /n|/ in *n|ãã* ‘horn’, *n|ami* ‘pangolin’). Tjwao also has prenasalised voiced clicks, for example, dental /n|g/ - *n|gee* ‘now’, *n|guu* ‘leg’, *n|gui* ‘mopane worms’, *n|goo-tcum* ‘moustache’ and lateral /n|g/ - *n|gui* ‘fat’, *n|goe* ‘moon’, *n|aba* ‘mopane tree’. It remains largely ambiguous if this is a phonemic contrast, or whether these clicks are allophones of each other, with nasal clicks appearing before a nasalised rhyme, and the prenasalised variants in all other environments.⁵⁸

Analogous to non-click sounds, there is a contrast between aspirated clicks and clicks + the affricate /x/. Example (4.8) below provides examples for both accompaniments and includes one minimal pair (‘hoe, rake’ vs. ‘spear’):

- | | | |
|-----------------------------------|-----|----------------------------|
| (4.8) a. <i>l hao</i> ‘hoe, rake’ | vs. | b. <i>l xao</i> ‘spear’ |
| c. <i>l hai</i> ‘to pull’ | | d. <i>l xara</i> ‘many’ |
| e. <i>l ham</i> ‘to follow’ | | f. <i>l xoo</i> ‘to dry’ |
| g. <i>l hii</i> ‘rhinoceros’ | | h. <i>l xani-xa</i> ‘star’ |
| i. <i>l xam</i> ‘urine’ | | j. <i>l xori</i> ‘seed’ |

There is a further distinction between glottal stop accompaniment clusters /l|ʔ, l|ʔ/ and those with an ejective accompaniment /l|x’, l|x’/. The ejective clusters can be interpreted as click + /k’ or kx’/. The affricate realisation is more frequent than the non-affricate one. As with their non-click counterparts, /k’/ and /kx’/ accompaniments are non-distinctive and therefore not

⁵⁸ This is also true for other Kalahari-Khoe languages, like Khwe (Kilian-Hatz 2008) and Ts’ixa (Fehn 2016).

distinguished orthographically. Examples showing the contrast between the plain click +/kx'/ and the plain click +/ʔ/, including three minimal pairs, are given below.

- (4.9) a. /ʔũã 'bone' vs. b. |x'ũã 'tonsils'
 c. |ʔee 'fire' d. |x'ae 'to fall'
 e. |ʔũũ 'hair' vs. f. |x'ũũ 'to kill'
 g. |ʔun 'name' h. |x'ao 'snake'
 i. |ʔao 'to insult' vs. j. |x'ao 'to chop'
 k. |ʔãã 'to buy' l. |x'aa 'to wash'
 m. |ʔoo 'to die' n. |x'um 'to cut'
 o. |ʔare 'left' p. |x'ae 'to meet'
 q. |ʔũã 'to return' r. |x'ãũ 'smell'

The phonemic distinction between click clusters with a glottal stop, for example, /ʔ/, and clusters with an ejective accompaniment, for example, /kx'/, exists in all Kalahari Khoe languages except for some dialects of Shua (Fehn 2018). However, not all words that can be reconstructed as having an ejective click onset in Proto-Kalahari Khoe languages have an ejective onset in Tjwao. For example, the reconstructed root *|x'un 'name' is realised as |ʔun in Tjwao. While this may suggest that ejective click clusters were partially lost in Tjwao, contact influence from Shua speakers residing close to the Tjwao also seems plausible. Acoustically, glottal stops and ejective accompaniments can be distinguished easily, even when no affrication is audible: when click+/ʔ/ clusters are preceded by a vowel, "slight nasality is occasionally audible" in the transition of the preceding vowel to the click (Nakagawa 2006: 167). Specifically, the click is preceded by a voiceless nasal, followed by an inaudible release of the uvular closure (Nakagawa Ibid.). In contrast, during the production of click + /k(x)'/ clusters, the click is auditorily followed by a long ejective noise that is identical to the non-click ejective stop (cf. Nakagawa 2006: 188).

While Tjwao has been shown to have two clicks only, specifically, /l, ʎ/. Vossen (1997) reconstructs four influxes *|, †, ʎ, ! for Proto-Khoe. The absence of the palatal /ʎ/ and alveolar /!/ influxes reflects click loss in Tjwao. This phenomenon has resulted in the transformation of the language's phoneme inventory in comparison to the proto language. Traill and Vossen (1997: 23) demonstrate that the abruptness and force used in the articulation of the palatal and alveolar clicks in Kalahari Khoe languages make them easily replaceable by non-click

consonants.⁵⁹ This appears to be true for most Kalahari Khoe languages displaying click loss, and it also holds for Tjwao where click loss has resulted in the neutralisation of the alveolar click /!/ to /k/ and the palatal click /ʄ/ to /tʃ/. It has further been suggested that the loss of the alveolar click is a preliminary to the loss of palatal click, as no language displaying palatal click loss retains the alveolar click (Traill 1986, Traill and Vossen 1997). Examples (4.10) and (4.11) below illustrate the patterns of alveolar and palatal click replacement in Tjwao in comparison⁶⁰ with the Proto-Khoe forms, adapted from Fehn (2020). As is shown in example (4.10), the non-click consonants that replace the alveolar click are velar stops or nasals. As discussed above, the palatal click is replaced by palatal stops or alveolar affricates, with some variation existing between the two (cf. ex. 4.11). The accompaniment is usually not affected and retained.

(4.10) Patterns of Alveolar Click Loss in Tjwao

<i>Patterns</i>	<i>Proto</i>	<i>Tjwao</i>
! > k	*!ũũ	kũũ ‘go’
g! > g	*g!am	gam ‘to throw’
!h > kh	*!hae	khae ‘to stab’
!x > x	*!xan(i)	xan ‘to sew’
!x’ > kx’	*!x’ao	kx’ao ‘neck’
!ʔ > ʔ	*!ʔãã	ʔãã ‘to know’
n! > ŋ	*n!ũũ	ŋuu ‘earth, land’
n!g > ng	*n!abe	ngabe ‘giraffe’

(4.11) Patterns of Palatal Click Loss in Tjwao

<i>Patterns</i>	<i>Proto</i>	<i>Tjwao</i>
	(Fehn 2018: 14)	
‡ > tʃ	*‡ee	tʃee ‘ear’
‡ > ts	*‡ui	tsui ‘nose’
n‡ > ndʒ	*n‡adu	ndʒoro ‘back’
‡x > tʃx	*‡xai	tʃxai ‘eye’

⁵⁹ Traill and Vossen (1997: 48) note that the alveolar /!/ and palatal /ʄ/ clicks require extreme articulations to maintain “the anterior closure during rarefaction and to ensure its rapid release”.

⁶⁰ Traill and Vossen (1997:26) note that, “the systematic nature of click loss can only be identified through comparative data”.

ǀx > tsx	ǀxoa	tsxoa ‘elephant’
ǀʔ > ʔ, ʔy	*ǀʔũũ	ʔyũũ ‘eat’
ǀx’ > ts’	*ǀx’oa	ts’oa ‘exit’

Although the alveolar click has been lost in lexical roots, it is still preserved in interjections and onomatopoeias. For example, the interjection *!-!* is used as a call for food, or to play catch chickens (cf. Andrason, Fehn and Phiri 2020). The alveolar click is also attested in onomatopoeias, for instance, *!ō !ō !ō !ō* ‘sound of water drops dripping’, *!obi* ‘sound of small stone falling into water’. The aspirated alveolar click sound *!h/* is also found in the language, for instance, *!ha !ha !ha !ha* ‘sound of lighting’, *!hu !hu !hu !hu !hu !hu* ‘sound of thunder’.

To conclude the above discussion of the consonants, Table 5 summarises of all the non-click and click consonant sounds attested in Tjwao. The consonants are presented according to their place and manner of articulation.

Table 5: Tjwao Consonant Inventory

	Labi a-l	Dental	Alveolar	Alveolar- palatal	Lateral	Palatal	Velar	Glottal
Simple stops:								
plain voiceless	p	l	t (!)	ts	ll	tc	k	ʔ
plain voiced	b	g	d	dz	gll	dj	g	
Complex stops:								
Ejective			t’	ts’		tc’	kx’	
Aspirated		lh	th (!h)	tsh	llh	tch	kh	
Stops Clusters:								
plain +x		lx		tsx	llx	tcx		
plain +ʔ		lʔ			llʔ			
plain +kx’		lx’			llx’			

Nasals:								
Plain	m	n	n		n	ny	ŋ	
Prenasalised voiced	(mb)	n g		ndz	n g	ndj	ng	
Fricatives			s c (z)				x	h
Tap								
Glides	w					y		

4.3 Phonotactic Structure

Phonotactics is the sequential arrangement of unit segments in a language (Crystal 1997: 392). It refers to the way in which consonant and vowel sounds are combined and arranged in the syllables of a language. The nature of syllables and how they are derived plays a major role in the lexical analysis of any language.

Across Khoe, the generally accepted account of the sound structure was first proposed by Beach (1938) based on Khoekhoe and has since been revised and expanded on by several scholars such as Traill (1985), Güldemann (2001) and Nakagawa (2006, 2010, 2011). Using the “decomposition theory”, Beach (1938) hypothesises that the templates CVV^{61} and CVN are derived from $CVCV$. The CVV roots are considered bimoraic because of the underlying $CVCV$ structure.

Haacke (2013: 51) expands on the decomposition hypothesis by stating that “if the deleted intervocalic consonant was oral, the vowel combination will be oral (“long”, if identical vowels; oral diphthong, if not identical); if the consonant was nasal, the combination is nasalised because of spreading (“nasal vowel”, if identical; nasal diphthong, if not identical).” This means that the feature [+nasal] is transferred to the oral vowels; hence, they become nasalised.

For lexical roots, the basic templates in Tjwao are: CVV , CVN , $CVCV$. There are numerous rules regarding the distribution of vowels and consonants in a lexical root that apply in Tjwao.

⁶¹ Consonant vowel vowel (CVV), consonant vowel nasal (CVN) and consonant vowel consonant vowel ($CVCV$).

Following Nakagawa's (2010, 2011) work, these rules can be exemplified using the basic $C_1V_1C_2V_2$ ⁶² structure. This includes CVV and CVN which, as mentioned above, are derived from CVCV. The most important phonotactic constraints that govern the distribution of vowels and consonants in Tjwao are summarised below:

- (a) Clicks are restricted to C_1 position.
- (b) Consonant clusters occur only in C_1 position.
- (c) Consonants that appear in C_2 position are /r b m n/.
- (d) The vowels /i, e, a, o, u, ĩ, ã, õ/ occur in V_1 and in V_2 .

Analogous to other Khoe languages, all click consonants in Tjwao only occupy the C_1 position (word initial) of lexical roots. Considering the cluster analysis adopted in this study, there are two C_1 slots identified. The first is for the onset and the second is for the offset, for example, C_{1A} and C_{1B} (cf. Güldemann 2001). Clicks are restricted to C_{1A} .

Non-click consonants behave differently from clicks, with some being able to occur in word initial and word medial (or C_2) position. The voiced bilabial stop /b/ may occur in word-initial position, for example, *baa* 'father' and also in word-medial position, for instance, *ʔaba* 'dog'. The voiceless bilabial /p/ is restricted to C_1 position, for example, *paa* 'to bite'. However, it is also found in word coda in interjections and onomatopoeias, for instance, *kip* 'calling chickens' *lhap* 'walking on water-not deep'. All other stops and stop clusters are attested in C_1 position only: for instance, /t/ - *tuu* 'rain', /d/ - *doa* 'kudu', /k/ - *kao* 'long', /g/ - *gam* 'throw', /ts/ - *tsãã* 'hot', /dz/ - *dzira* 'bird', /tʰ/ - *tʰũũ* 'good', /tsʰ/ - *tsʰãã* 'steal', /kxʰ/ - *kxʰoo.xo* 'meat, animal', /tsh/ - *tshaa* 'water', /kh/ - *khuri* 'pig', /th/ - *thũũ* 'pain'; /tsx/ - *tsxoa* 'elephant'; /tex/ - *texai* 'eye', /ʔ/ - *ʔae* 'village'. The velar stop /k/ occasionally occurs in a word-medial position in borrowed lexemes / loanwords, for example, *huku* 'chicken', *boka* 'thank you'.

The velar nasal /ŋ/⁶³ is restricted to C_1 position, for instance, /ŋ/ - *ŋuu* 'land'. Other nasal sounds, that is, /n/ and /m/, may also appear in word-initial, word-medial, and word-final position. There are very few lexemes with a nasal as C_1 , for instance, /m/ - *maa* 'give', *mii* 'talk/say', *mũũ* 'see', and /n/ - *nao* 'what', *naa.re* 'who'. While /n/ appears to be common in C_2

⁶² C_1 = initial consonant, V_1 =first vowel, C_2 = medial consonant, V_2 = final vowel.

⁶³ The sound historically goes back to loss of the nasal alveolar click *n!.

position (e.g., *dini* ‘honey’, *lxani* ‘star’, *ts’ini* ‘smoke’ *dzini* ‘sun’, *kx’uni* ‘louse’, *g|ana* ‘leaf’), there are few examples with the nasal sound /m/ occupying the word-medial position (e.g., *kama* ‘since’, *thama* ‘grass’). When /n/ appears as C₂ of CVCV roots, it is frequently followed by the vowel /i/. /m/ and /n/ are the only consonants allowed in coda position, that is, in CVN lexical roots, for example, /m/ - *tum* ‘swallow’, *lham* ‘to follow’; /n/ - *xan* ‘to sew’, *khan* ‘to crawl’.

The prenasalised sounds deriving from click loss only appear in C₁ position, for example, *ndzuu* ‘black’, *ndzoro* ‘back’, *ndjuu* ‘house’, *ndjaa* ‘dance’, *ngabe* ‘giraffe’, *ngaro* ‘chamelon’, *ngabi* ‘to turn’. /ng/ also occurs in C₂ position of loanwords, for example, *shinga* ‘work’, *dangara* ‘kraal’.

The fricatives /s/, /c/, /h/ and /x/ occur in a word-initial position only, for instance, /s/ - *sãã* ‘to rest’, *see* ‘to take’; /c/ - *coro* ‘monitor lizard’; /h/ - *haa* ‘come’, *hĩĩ* ‘to do’; /x/ - *xam* ‘lion’, *xue* ‘run’. The voiced stop /z/ is attested in C₂ position of loanwords, for instance, *mbizi* ‘zebra’. Although some rather common words may suggest that /x/ is found in C₂ position as well, these are either lexicalised compounds involving the root *xuu/xoo* ‘thing’ acting as nominaliser (e.g., *kx’oo.xo* ‘meat’), or verbs with a causative suffix (e.g., *tee.xu* ‘to put’).

The consonant /r/ is restricted to the word-medial position of genuine lexical roots, for instance, *khuri* ‘pig’, *lxuru* ‘cold’, *karo* ‘rock’. It may, however, appear as C₁ in grammatical morphemes, for instance, *ra*, *re*, *ro*, *rera* ‘plural’. Comparative work suggests that word-medial /r/ is an allophone of /d/, rather than a phonemic consonant (cf. Fehn 2016: 28). The consonant /l/ is limited to C₁ and C₂ positions in loanwords, for example, *laba* ‘write’, *kolo* ‘school’.

4.3.1 Structure of Lexical Roots

As mentioned above, Tjwao lexical roots are bimoraic. The examples in 4.12 below illustrate the structure of Tjwao lexical roots following the cross-Kalahari Khoe phonotactic template presented by Güldemann and Nakagawa (2018).

- (4.12) a. CVV *xue* ‘white’, *paa* ‘bite’, *maa* ‘give’, *tuu* ‘rain’
 b. CVN *dam* ‘tongue’, *tan* ‘stand up’, *kx’am* ‘mouth’,
 c. CVCV *kare* ‘foot’, *dzini* ‘day’, *labu* ‘fly’, *thama* ‘grass’
 d. C(C)VCV *tcxai* ‘eye’, *lxuru* ‘cold’, *lxara* ‘many’

- e. C(C)VN ɭx'am 'beat', ɭx'um 'cut'
 f. C(C)VV ɭx'ae 'meet', ɭx'ao 'chop'

The distribution of vowel and consonant phonemes in Tjwao within the phonotactic templates presented above follows from the generalisations outlined in section 4.3 above. The only consonants that occur in the word-final slot are the nasal consonants /m/ and /n/. The most frequent consonant occurring in C-offset are /x/, /ʔ/ and /kx'/. The consonants /r/, /b/, /m/ and /n/ are the only consonants that can occur in C₂ (or word-medially) in a CVCV template (cf. ex. 4.13).

(4.13) Word-medial Consonants

- a. /ɾ/ ɭxore 'nail/claw', ɭxara 'many', dzira 'bird', cori 'tobacco'
 b. /n/ ɡɭana 'leaf', ts'ini 'smoke', dzini 'honey, nyunu 'lies'
 c. /m/ nɭami 'pangolin', nɭuma 'kiss', thama 'grass', nɭimi 'throw'
 d. /b/ nɭgaba 'mopane tree', ngabe 'girraffe', labo 'shoe', ʔaba 'dog'

There are few lexemes with a trimoraic phonotactic structure in Tjwao, for instance, *boo-ri* 'to tell', *karee* 'foot', and *debee* 'salt'. Nakagawa (2006) and Fehn (2016) interpret *boo.ri* for Glui and Ts'ixa as combination of a C(C)VV lexical root and a fossilised suffix, for example, *boo-ri - boo.ri*. The CVCVV lexemes also occur in Khwe, for instance, *dovee* 'salt' (cf. Kilian-Hatz 2003) and in Ts'ixa for instance, *labuu* 'fly' (cf. Fehn 2016: 44) and probably resulted from tonal depressor effects due to an unknown non-oral phonation type in V₁ which may have existed in the proto-language (Elderkin 2011).

There are few lexemes attested as having a CVCVCVCV structure, for instance, *teteberu* 'butterfly', *tcibiriri* 'lizard'. While it is possible that these forms constitute borrowings from languages adhering to a phonotactic template different from Khoe, it is also possible that they are ideophones involving partial reduplication.

Loanwords can easily be recognized because they do not correspond to Tjwao's phonotactic structure of genuine lexical roots. Phonotactic templates introduced by means of known loanwords are exemplified below:

- (4.14) a. CVC(C)V ɡomba 'antbear', laba 'to count', beke 'week', ɡudo 'baboon'

- b. C(C)VCV *mbuta* ‘reader’, *kwala* ‘to write’, *mbizi* ‘zebra’
 c. CVC(C)VCV *dangara* ‘kraal’

4.3.2 Structure of Grammatical Elements

Grammatical elements differ from lexical roots in displaying a clear preference for monomoraic roots, that is, a CV structure. There are no grammatical elements in Tjwao which feature click sounds. The non-click consonants that are most frequent in C₁ position of grammatical elements are /h/, /k/, /t/ and /r/. The only grammatical morpheme that exhibits a CVV structure is the imperfective marker *kua*. In addition, a CVN template is found with the negation marker *tam*. CVCV structure is found with the plural marker *rera*. The examples in (4.15) below illustrate the structure of grammatical morphemes.

(4.15) CV

- a. *ka* ‘anterior tense marker’
 b. *hĩ* ‘past marker’
 c. *ha* ‘perfect marker’
 d. *ta* ‘imperfective negation marker’
 e. *ra/re* ‘plural marker’
 f. *nya* ‘future marker’

4.3.3 Structure of Ideophones, Interjections and Onomatopoeias

Ideophones, interjections and onomatopoeias differ from lexical roots in their phonotactic structure. Nakagawa (2011), Kilian-Hatz (2008) and Fehn (2016) observe that ideophones in Kalahari Khoe are distinct from other lexical roots because they allow C₁VC₂ structure, whereas C₂ is restricted to /p/ and sometimes /t/. In Tjwao, interjections and onomatopoeias can be reduplicated or triplicated. The examples in (4.16) illustrate the triplication of the syllables of onomatopoeias and interjections.⁶⁴

(4.16)

- a. onomatopoeias

⁶⁴ At present there are few examples of ideophones in Tjwao. However, it is hoped that the author’s ongoing research on the documentation and study of ideophones, interjections and onomatopoeias in Tjwao will provide more examples.

CVC *||hap* ‘walking on water- not deep’

||hap ||hap ||hap ‘repeating sound made when walking in water’

b. interjections

CVC *kip* ‘calling a chicken’

kip kip kip ‘repeating calling the chicken’

CHAPTER FIVE: NOMINAL CATEGORIES AND THEIR MORPHOSYNTAX

In the present chapter, the noun and noun-phrase structure of Tjwao will be described. Section 5.1 discusses properties of Tjwao nouns, and how noun-phrases are formed. Section 5.2 addresses the notion of person, gender, and number (PGN) markers and personal pronouns which possess inherent case distinctions. Section 5.3 focuses on the marking of plural and nominal gender, including a specific sentence construction with a noun followed by a co-referential pronoun. Nominal modifiers are dealt with in section 5.4, and section 5.5 discusses nominal derivation.

5.1 Nouns and Noun-phrase

A noun-phrase minimally consists of a noun or a pronoun. In Tjwao, nouns form the dominant part of the lexical inventory. Formally, they adhere to the phonotactic templates of lexical words discussed in Chapter Four. Nouns can be divided into two main groups, namely, ‘animate’ and ‘inanimate’. Animate nouns include nouns that can act or are perceived as acting, such as people and animals. Those that denote entities that cannot act are called inanimate nouns.⁶⁵ All nouns can be pluralised by means of suffixes which are attached to the nominal root. They may be optionally modified by demonstratives, quantifiers or numerals, adjectives, possessives, and relative clauses.

5.2 The Concept of Person, Gender and Number (PGN) Markers⁶⁶

Person, gender, and number (PGN) marking is a central concept in the description of nominal marking in the Khoe-Kwadi language family. The term PGN was first used by Hagman (1977: 41) for a group of suffixes found in Nama (Khoekhoe). These suffixes are attached to both nouns and pronominal stems, according to Hagman (Ibid.), so they constitute part of the pronominal paradigm of the language. PGNs are portmanteau morphemes that mark a three-way distinction in each person, gender, and number category. In some languages, they may also encode two- (cf. Khwe: Kilian-Hatz 2008 and Ts’ixa: Fehn 2016), or three-way case distinctions (Gǀui: Nakagawa 1993, Tjwao: Fehn and Phiri 2017). In languages that employ

⁶⁵ Tjwao, like other Khoe-Kwadi languages, possesses a subset of nouns which denote simultaneously both an entity and its product. For example, the noun *kx’oo.xo* refers to ‘animal’ (source) and ‘meat’ (product).

⁶⁶ The discussion of PGNs, pronouns and co-referential constructions provided in this thesis expands on the preliminary findings published in Fehn and Phiri (2017).

PGNs as article-like markers attaching to nouns, these are identical to those used to form the pronouns for the third person. In some languages, including Tjwao, this distinguishes them from the pronouns of the first and second person which constitute an independent word and can stand on their own.

As Tjwao does not obligatory mark nouns for gender, the complete paradigm of distinctions is only evident in the pronouns of the language. In first and second person, the pronouns present simplex forms, in the third person, however, they are complex, that is, they consist of a base *ʔe* pronoun and a suffix. In addition, a subset of pronominal forms displays a three-way case distinction (Nominative, Accusative, Genitive). Personal pronouns and case distinctions are discussed in detail in the following sections.

5.2.1 Personal Pronouns and Case Distinctions

The pronominal system of Tjwao distinguishes three persons (first/second/third), three genders (common/feminine/masculine), and three numbers (singular/dual/plural). In addition, the pronouns of the first person singular and dual, as well as the pronouns of the third person singular and plural, encode a case distinction between nominative and accusative. It will be noted that the nominative pronouns of the third person end in *-e*, while the accusative pronouns (except the third person common gender) end in *-a*. One may therefore suggest that *-e* is related to nominative case marking, while *-a* is related to accusative case marking. A genitive⁶⁷ or dependent form is distinguished in the first person, just as well as in the third person singular and plural.

Tjwao does not distinguish between inclusive and exclusive references in the first and second person pronouns (e.g., ‘we-all’ vs. ‘just us, not you’). Such a contrast exists in southern varieties of Tshwa (cf. Chebanne and Mathes 2013, Chebanne 2015, Chebanne and Collins 2016, Pratchett 2018), as well as in Glui-Glana (Nakagawa 2013, 2017) and Khoekhoe (Hagman 1977).

Like other languages of the Kalahari Khoe branch (see, e.g., Kilian-Hatz 2008 for Khwe, Fehn 2016 for Ts’ixa), Tjwao shows a distinction between first and second person pronouns, which

⁶⁷ The study follows Nakagawa (1993, 2017) for Glui, and Fehn and Phiri (2017) for Northern Tshwa varieties in the use of “genitive” to refer to dependent forms appearing with a nominal head. Other scholars, e.g., Collins and Chebanne (2016: 21), refer to them as “bare/possessor pronouns”.

form a single morphological unit, and those of the third person, which are morphologically complex: as mentioned above, they consist of the demonstrative base *ʔe-* and a suffix encoding person, gender, and number.

A special case is the first-person common gender, which consists of the noun *tcoa* ‘person’ plus a plural suffix *-re* (Nominative), *-ra* (Accusative) or *-n* (Genitive) (cf. also 5.3.3). A synonymous form *tsi* with cognates in other languages of Kalahari Khoe (cf. Chebanne, and Mathes 2013, Vossen 2013, Fehn 2016, Chebanne 2014, Pratchett 2018) only appears sporadically.

Tjwao pronoun series for Nominative, Accusative and Genitive are provided in Table 6a-c below.⁶⁸

Table 6a: Subject Pronoun Series (Nominative)

	Common	Feminine	Masculine	
1 st	ti, tire			Singular
2 nd		ca	tca	
3 rd	ʔe	ʔe.ce	ʔe.be	
1 st	khabe	sabe	tsabe	Dual
2 nd	kharo	saro	tsaro	
3 rd	ʔe.khora/ ʔe.khoara	ʔe.sara	ʔe.tsara	
1 st	tsi/ tcoa.n(a)	?	ka	Plural
2 nd	to/ toa	dzao	kao	
3 rd	ʔe.na	e.dzia	ʔe.kua	

Table 6b: Object Pronoun Series (Accusative)

	Common	Feminine	Masculine	
1 st	tia			Singular
2 nd		ca	tca	

⁶⁸ The question mark (?) indicates subject and object pronouns that the researcher has not been able to elicit from the participants.

3rd	ʔe	ʔe.ca	ʔe.ba	
1st	khaba	saba	tsaba	Dual
2nd	kharo	saro	tsaro	
3rd	ʔe.khora/ ʔe.khoara	ʔe.sara	ʔe.tsara	
1st	tsi/ tcoa.n(a)	ʔ	ka	Plural
2nd	ʔ	dzao	kao	
3rd	ʔe.na	ʔe.dzia	ʔe.kua	

Table 6c: Dependent pronouns (Genitive)

	Common	Feminine	Masculine	
1st	ti			Singular
2nd		ca	tca	
3rd	ʔe	ʔe.ci	ʔe.m	
1st	kham	sam	tsam	Dual
2nd	kharo	saro	tsaro	
3rd	ʔe.khora/ ʔe.khoara	ʔe.sara	ʔe.tsara	
1st	tsi/ tcoa.n	ʔ	ka	Plural
2nd	ʔ	dzao	kao	
3rd	ʔe.n	ʔe.dzi	ʔe.ku	

In the nominative paradigm (Table 6a), Tjwao exhibits two first-person singular forms *tire* and *ti*. The use of the nominative *tire* is unrestricted. It can occur with the imperfective *kua* as well as any other TAM category (ex. 5.1a-d). In contrast, *ti* is restricted to the position before the imperfective particle *kua* (see 5.1d-e).

(5.1) a. *Tire ii ʔnyũũ loo-kaxu-na-ha.*

<i>tire</i>	<i>ii</i>	<i>ʔnyũũ</i>	<i>loo-kaxu-na-ha</i>
1sg	DEM	food	end-CAU-J-PRF

I finished the food.

b. *Tire kx'ai ʔe ʎam-a-hĩ.*

<i>tire</i>	<i>kx'ai</i>	<i>ʔe</i>	<i>ʎam-a-hĩ</i>
1sg	before	3sg	hear-J-PST

I heard it before.

c. *Tire kua tcii.*

<i>tire</i>	<i>kua</i>	<i>tcii</i>
1sg	IPFV	be.sick

I am sick.

d. *Ti kua ʎxuru.*

<i>ti</i>	<i>kua</i>	<i>ʎxuru</i>
1sg	IPFV	shiver

I am shivering.

e. *Ti kua tsũĩ tsxoa ʎũã-rera mũũ.*

<i>ti</i>	<i>kua</i>	<i>tsũĩ</i>	<i>tsxoa</i>	<i>ʎũã-rera</i>	<i>mũũ</i>
1sg	IPFV	small	elephant	child-pl	see

I see young elephants.

In example (5.2) below, nominative, and accusative forms are contrasted. All the pronouns that are illustrated in the examples (5.2a-h) are used for the subject of the clause, and hence bear an affinity to nominative case marking. The pronouns that appear in the examples (5.2i-p) are used for the direct object of the verb phrase, corresponding to accusative case.

(5.2)

a. *Ti kua xam mũũ.*

<i>Ti</i>	<i>kua</i>	<i>xam</i>	<i>mũũ</i>
1sg.NOM	IPFV	Lion	See

I see the lion.

i. *Xam kua ti.a paa.*

<i>xam</i>	<i>kua</i>	<i>ti.a</i>	<i>paa</i>
lion	IPFV	1sg.ACC	bite

The lion is biting me.

b. *Tca kua xam mũũ.*

<i>tca</i>	<i>kua</i>	<i>xam</i>	<i>mũũ</i>
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j. *Xam kua tca paa.*

<i>xam</i>	<i>kua</i>	<i>tca</i>	<i>paa</i>
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	2sg.M.NOM	IPFV	Lion	See	lion	IPFV	2sg.M.ACC	bite
	You (m.) see the lion.				The lion is biting you (m.).			
c.	<i>?e.be kua xam mĩũ.</i>				k. <i>Xam kua ?e.ba paa.</i>			
	?E.be	<i>kua</i>	<i>xam</i>	<i>mĩũ.</i>	<i>xam</i>	<i>kua</i>	?e.ba	<i>paa.</i>
	3sg.M.NOM	IPFV	Lion	see	lion	IPFV	3sg.M.ACC	bite
	He sees the lion.				The lion is biting him.			
d.	<i>?E kua xam mĩũ.</i>				l. <i>Xam kua ?e paa.</i>			
	?e	<i>Kua</i>	<i>xam</i>	<i>mĩũ</i>	<i>xam</i>	<i>kua</i>	?e	<i>paa</i>
	3sg.C.NOM	IPFV	Lion	See	lion	IPFV	3sg.C.ACC	bite
	It sees the lion.				The lion is biting it.			
e.	<i>Tsabe kua xam mĩũ.</i>				m. <i>Xam kua tsaba paa.</i>			
	tsabe	<i>kua</i>	<i>xam</i>	<i>mĩũ</i>	<i>xam</i>	<i>kua</i>	tsaba	<i>paa</i>
	1du.M.NOM	IPFV	Lion	See	lion	IPFV	1du.M.ACC	bite
	We two (men) are seeing the lion.				The lion is biting us two (men).			
f.	<i>Khabe kua xam mĩũ.</i>				n. <i>Xam kua khaba paa.</i>			
	khabe	<i>kua</i>	<i>xam</i>	<i>mĩũ</i>	<i>xam</i>	<i>kua</i>	khaba	<i>paa</i>
	1du.C.NOM	IPFV	Lion	See	lion	IPFV	1du.C.ACC	bite
	We two (m+f) are seeing the lion.				The lion is biting us two.			
g.	<i>?E.sara kua xam mĩũ.</i>				o. <i>Xam kua ?e.sara paa.</i>			
	?e.sara	<i>kua</i>	<i>xam</i>	<i>mĩũ</i>	<i>xam</i>	<i>kua</i>	?e.sara	<i>paa</i>
	3du.F.NOM	IPFV	Lion	See	lion	IPFV	3du.F.ACC	bite
	They (2f) are seeing the lion.				The lion is biting them (2f).			
h.	<i>Ka kua xam mĩũ.</i>				p. <i>Xam kua ka paa.</i>			
	ka	<i>kua</i>	<i>Xam</i>	<i>mĩũ</i>	<i>xam</i>	<i>kua</i>	ka	<i>paa</i>
	1pl.M.NOM	IPFV	Lion	See	lion	IPFV	1pl.M.ACC	bite
	We (men) are seeing the lion.				The lion is biting us (men).			

Analogous to Khwe (cf. Kilian-Hatz 2008: 77), genitive constructions in Tjwao are used to express part-whole relations including body-parts, material, and local relations. Pronouns of the genitive series are primarily found in attributive possessive constructions (ex. 5.3a-e, see also section 5.3.3). In the examples below, the genitive pronouns *ti* ‘1sg’, *tca* ‘2sg.M’, *ʔe.m* ‘3sg.M, and *ʔe.ci* ‘3sg.F’ show an attributive relationship with the head noun or pronoun in the constructions.

(5.3) a. *ʔE.na kua ti mari ka ʔini.*

<i>ʔe.na</i>	<i>kua</i>	<i>ti</i>	<i>mari</i>	<i>ka</i>	<i>ʔini</i>
3pl.C	IPFV	1sg.GEN	money	about	think

They are thinking about my money.

b. *Tca ʔun nare?*

<i>tca</i>	<i>ʔun</i>	<i>nare</i>
2sg.M.GEN	name	what

What is your name?

c. *ʔEm dumu tire lam-a-ha.*

<i>ʔe.m</i>	<i>dumu</i>	<i>tire</i>	<i>lam-a-ha</i>
3sg.M.GEN	voice	1sg.NOM	hear-J-PRF

I have heard his voice.

e. *Tire ʔui.ka ʔe.ci kx'ao.tco tcum lx'are-hĩ.*

<i>tire</i>	<i>ʔui.ka</i>	<i>ʔe.ci</i>	<i>kx'ao.tco</i>	<i>tcum</i>	<i>lx'are-hĩ</i>
1sg.NOM	yesterday	3sg.F.GEN	husband	with	meet:J-PST

I met her husband yesterday.

Apart from the case dependent forms, some examples suggest that pronouns of the genitive series may also be used to express the clausal subject in certain types of subordinate clauses. In other Kalahari Khoe languages, such as Gǀui-Gǀana (Collins and Chebanne 2016: 27ff; Nakagawa 2017) and Northern Tshwa (Fehn and Phiri 2017: 112) varieties other than Tjwao, the use of a separate set of pronoun types in subordinate clauses has also been attested.

(5.4) a. *ʔE.m tcii ndzoro.ʔa ʔe.m tcxai-re ka mũũ-ta.*

<i>ʔe.m</i>	<i>tcii</i>	<i>ndzoro.ʔa</i>	<i>ʔe.m</i>	<i>tcxai-re</i>	<i>ka</i>	<i>mũũ-ta</i>
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3sg.M.GEN be.sick after **3sg.M.GEN** eye-pl OBL see-NEG.IPFV
 After he was sick, (he) could not see with his eyes.

b. *Ti kua.nya ʔe.kua ʔe ɬx'am ma ʔe.ku kua.nya ʔam.*

<i>ti</i>	<i>kua.nya</i>	<i>ʔe.kua</i>	<i>ʔe</i>	<i>ɬx'am</i>	<i>ma</i>	<i>ʔe.ku</i>	<i>kua.nya</i>
1sg	FUT	3pl.M	?	beat	quot	3pl.M.GEN	FUT
<i>ʔam</i>							
agree							

I will beat them until they agree.

c. *ʔE.na kua tolo kaa kuu.ʔo-ra ʔe.n kua ɬʔãĩ-xu a.*

<i>ʔe.na</i>	<i>kua</i>	<i>tolo</i>	<i>kaa</i>	<i>kuu.ʔo-ra</i>	<i>ʔe.n</i>	<i>kua</i>
3sg.C	IPFV	shop	look.for	clothing-pl	3pl.C.GEN	IPFV
<i>ɬʔãĩ-xu</i>						
<i>a</i>						
buy-NMZ LOC						

They look for a shop where they can buy clothes.

In addition to the three paradigms outlined in Table 6a-c above, there is a different pronoun for the second person singular masculine, *tci*, which is used exclusively in imperative or hortative (ex. 5.5a-b) contexts.

5.5 a. *Ndlovu ma tci tsee.xu kx'ui ta mii-a-hĩ.*

<i>Ndlovu</i>	<i>ma</i>	<i>tci</i>	<i>tsee.xu</i>	<i>kx'ui</i>	<i>ta</i>	<i>mii-a-hĩ</i>
personal.name	quot	2sg.M.HORT	truth	speak	COMPL	say-J-PST
Ndlovu said you must speak the truth.						

b. *Tci tca tshau-ra ɬx'aa.*

<i>tci</i>	<i>tca</i>	<i>tshau-ra</i>	<i>ɬx'aa</i>
2sg.M. HORT	2sg.M	hand-pl	wash
You must wash your hands.			

5.3 Nominal Gender Marking

Tjwao does not have nominal gender marking comparable to other Khoe-Kwadi languages (cf. Hagman 1977, Visser 2013, Kilian-Hatz 2008, Fehn 2016), but there is a limited gender-marking system distinguishing [+human] from [-human] nouns. [+human] nouns may be marked for gender, with the gender-markers coinciding with the suffixes used for the formation of the third person pronouns. Like these pronouns, they display a three-way case distinction (-*be* > NOM, -*ba* > ACC, -*m* > GEN; -*ce* > NOM, -*ca* > ACC, -*ci* > GEN). The gender-marking suffixes are directly attached; alternatively, the corresponding pronoun directly follows the head noun. In Tjwao, the combination of both strategies (i.e., suffixal marking + following pronoun) is also possible. In contrast, [-human] nouns may only be followed by the 3sg.C pronoun *e* (see also Fehn and Phiri 2017).

5.3.1 Suffixes with Personal Nouns

The marking of gender in Tjwao singular nouns is only found with [+human] nouns, for instance, *Msindo-be* ‘proper name+*be*>sg.M.NOM, *Maria-ce* ‘proper name +*ce*>sg.F.NOM’, *Ndlovu-m* ‘proper name + *m* >sg.M.GEN, *Msindo-ba* ‘proper name +*ba* >sg.M.ACC. In contrast, [-human] nouns are never marked for gender.

The only animate noun inflected for gender that is not a proper noun attested in Tjwao is ostrich, for example, *g|aro-m* ‘ostrich+*m* >sg.M.GEN, *g|aro-be* ‘ostrich +*be* >sg.M.NOM. However, this was only found in the story of the *Origin of Fire* (see appendix) in which the ostrich and *Djo|ua-be* have human characters.

(5.6) a. *G|aro-be ?e.be kua xu-ra tsãã.xu*

<i>g aro-be</i>	<i>?e.be</i>	<i>kua</i>	<i>xu-ra</i>	<i>tsãã.xu</i>
ostrich-sg.M	3sg.M	IPFV	thing-pl	cook

The ostrich was cooking things (was the only one who ate cooked meals).

Occasionally, in contexts of nominalisation, such as, *tsee.xu* ‘truth’ > *tsee.xu-ba* ‘judge’ the marking of gender is also attested with other [+human] referents.

(5.7) a. *?Ui.ka ?e.be tsee.xu-ba müü-a-hĩ.*

<i>?ui.ka</i>	<i>?e.be</i>	<i>tsee.xu-ba</i>	<i>müü-a-hĩ</i>
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yesterday 3sg.M.NOM **truth-sg.M.ACC** see-J-PST
 He saw the judge yesterday.

5.3.2 Co-referential Pronouns

In Tjwao, pronouns may also be used co-referentially following a noun. In this type of construction, [+human] nouns are followed by the 3sg.M or 3sg.F pronoun. The use of the pronominal co-referent in Tjwao is not compulsory. There are also cases in which it does not occur, so its existence serves a particular function. Fehn and Phiri (2017) hypothesise that this construction can be described as topicalisation involving left-dislocation of the topical noun-phrase. Hence, example (5.8a) below can be literally translated as [*the boy, he is lighting a fire*] where the referent ‘*the boy*’ is dislocated to the left, making it a ‘topic’.

(5.8) a. *Kx'aro-lũã ʔe.be kua lʔee paa-pa.*

<i>[kx'aro-lũã]</i> _{NP-SBJ}	<i>[ʔe.be]</i> _{PRO-SBJ}	<i>kua</i>	<i>lʔee</i>	<i>paa-pa</i>
boy-DIM	3sg.M	IPFV	fire	Kindle

The young boy is lighting a fire.

b. *Ti-baa Ndlovu ʔe.be kua loe o kũũ-ka.*

<i>ti-baa</i>	<i>Ndlovu</i>	<i>ʔe.be</i>	<i>kua</i>	<i>loe</i>	<i>o</i>	<i>kũũ-ka.</i>
?father	Ndlovu	3sg.M	IPFV	sleep	PURP	go-VOL

The father of Ndlovu wants to go to sleep.

c. *Balisi ʔe.ce kua maa-tco-re tcaru kaa-ma.*

<i>Balisi</i>	<i>ʔe.ce</i>	<i>kua</i>	<i>maa-tco-re</i>	<i>tcaru</i>	<i>kaa-ma.</i>
Balisi	3sg.F	IPFV	female-person-pl	firewood	collect.firewood:J-BEN

Balisi (f.) is fetching firewood for the women.

According to what has been described above for [+human] nouns, [-human] nouns (e.g., *lii* ‘song’ in (ex. 5.9a) and *lʔum* ‘navel’ *tsxoa* ‘elephant’ in (ex. 5.9b-c) may be followed by 3sg.C pronoun *ʔe* in a co-referential construction (also see Fehn and Phiri 2017).

(5.9) a. *Ii lii ʔe kari.se kãĩ ʔe.*

<i>ii</i>	<i>lii</i>	<i>ʔe</i>	<i>kari.se</i>	<i>kãĩ</i>	<i>ʔe</i>
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DEM **song** **3sg.C** INTENS be.nice COP

This song is very nice.

b. *ʔUi.ka ka ʔe.ci |ʔum ʔe kua ka thũũ.*

<i>ʔui.ka</i>	<i>ka</i>	<i>ʔe.ci</i>	 ʔum	<i>ʔe</i>	<i>kua</i>	<i>ka</i>	<i>thũũ</i>
yesterday	ANT	3sg.F.GEN	navel	3sg.C	IPFV	ANT	hurt

Yesterday her navel was hurting.

c. *Tsxoa ʔe tshaa kx'aa kũũ-a-ha*

<i>tsxoa</i>	<i>ʔe</i>	<i>tshaa</i>	<i>kx'aa</i>	<i>kũũ-a-ha</i>
elephant	3sg.C	water	drink:J	go-J-PRF

The elephant drank water and then moved on.

Occasionally, the third person common gender singular *ʔe* occurs with [+human] nouns. In example (5.10a-b), the nouns *lũã* ‘child’ and *kae.tca-tco* ‘hunter’ co-occur with the co-referential pronoun *ʔe*.

(5.10) a. *|ũã ʔe gai-|uu o ʔabo.*

 ũã	<i>ʔe</i>	<i>gai- uu</i>	<i>o</i>	<i>ʔabo</i>
child	3sg.C	mountain-top	LOC	climb

The child climbed the mountain.

b. *Kae.tca-tco ʔe |ʔee ka koro tcãã-na-hĩ.*

<i>kae.tca-tco</i>	<i>ʔe</i>	<i> ʔee</i>	<i>ka</i>	<i>koro</i>	<i>tcãã-na-hĩ</i>
hunt-AG	3sg.C	fire	with	cave	enter-J-PST

The hunter entered the cave with a torch.

5.3.3 Number

Gender in Tjwao is not reflected in plural marking. The generic plural marker is a suffix *-rVowel*. (e.g., *ra*, *re*). In addition, plural markers, that is, *-re*, *-ra*, *-n*, exhibit a case distinction. The current evidence shows that the distinction that exist between the plural suffixes *-ra* and *-re* corresponds to a nominative and accusative case distinction as illustrated in examples (5.11a-

b) and (5.12a-d) below, whereas the plural marker found with dependent (genitive) nouns is -*n* (ex. 5.13a-b).

(5.11) Nominative

a. *l'ee kua ηaa kika tcoa-re luu-ta.*

<i>l'ee</i>	<i>kua</i>	<i>ηaa</i>	<i>kika</i>	<i>tcoa-re</i>	<i>luu-ta</i>
fire	IPFV	burn	when	person- pl.NOM	get.near-NEG.IPFV

When the fire burns, the people do not get nearby.

b. *Duana glee.tco-re ηkonl'a-ra ρai-a-ha.*

<i>ηoana</i>	<i>glee.tco-re</i>	<i>ηkonl'a-ra</i>	<i>ρai-a-ha</i>
three	woman- pl.NOM	bucket-pl	carry-J-PRF

Three women are carrying buckets.

(5.12) Accusative

a. *ρE.be ρui.ka tcoa-ra mũũ-a-hĩ.*

<i>ρe.be</i>	<i>ρui.ka</i>	<i>tcoa-ra</i>	<i>mũũ-a-hĩ</i>
3sg.M.NOM	yesterday	person- pl.ACC	see-J-PST

He saw (some) people yesterday.

b. *Tire kua gloo gee-ra mũũ kue ka.wa.xa.ka.*

<i>tire</i>	<i>kua</i>	<i>gloo</i>	<i>gee-ra</i>	<i>mũũ</i>	<i>kue</i>	<i>ka.wa.xa.ka</i>
1sg	IPFC	big	cow- pl.ACC	see	river	across

I see big cows across the river.

c. *ρE.kue djii-ra lx'aro-ha.*

<i>ρe.kue</i>	<i>djii-ra</i>	<i>lx'aro-ha</i>
3pl.M	tree- pl.ACC	chop:J-PRF

They cut down trees.

d. *Kae.tca-tco-re k'oo.xo lĩĩ-ra ts'aa.xu-na.*

<i>kae.tca-tco-re</i>	<i>k'oo.xo</i>	<i>lĩĩ-ra</i>	<i>ts'aa.xu-na</i>
hunt-AG-pl	animal	intestine- pl.ACC	take.out-TAM

The hunters took out the intestines of the animal.

(5.13) Genitive

a. *Tsxaru-n ʔii.ra ʔe.na see-ha*

tsxaru-n *ʔii.ra* *ʔe.na* *see-ha*
firewood-**pl.GEN** all 3sg.C take:J-PRF

They have taken all the firewood.

b. *Tsabe kua ka tsam gee-n tcum kũũ.*

tsabe kua ka tsam gee-n tcum kũũ
1du.M IPFV ANT 1du.M.GEN cattle-**pl.GEN** with go

We two were going with our cattle.

The plural marker *-ra* and *-re* can also be suffixed to [+human and -human nouns] as shown in examples (5.14a-c) below:

(5.14) a. *Kx'ao.tco-re kua Tjwao kx'ui.*

kx'ao.tco-re *kua* *Tjwao* *kx'ui*
man-**pl** IPFV Tjwao speak

The men are speaking Tjwao.

b. *Dana.tco-re kua Tjwao kx'ui.*

dana.tco-re *kua* *Tjwao* *kx'ui*
girl-**pl** IPFV Tjwao speak

The girls are speaking Tjwao.

c. *Glaro-be ʔe.be kua xa tcu-ra dzaro-kaa*

glaro-be *ʔe.be* *kua* *xa* *tcu-ra* *dzaro-kaa*
ostrich-sg.M 3sg.M IPFV DEM coal-**pl** pick.up-VOL

The ostrich wanted to pick up the coal.

However, it seems that information-structural or syntactic properties besides case can affect the choice of the appropriate suffix to mark plurality (also see Fehn and Phiri 2017: 113-114).

The example below shows an exception where the accusative plural suffix *-ra* is attached to a subject noun-phrase.

- (5.15) a. *lAm dana.tco-ra kua Tjwao kx'ui.*
lam dana.tco-ra kua Tjwao kx'ui
 two girl-pl IPFV Tjwao speak
 The two girls are speaking Tjwao.

With a closed set of words denoting persons, for instance, *kx'aro* 'boy' and *lũã* 'child', the plural suffixes *-rera* and *-are* occur. The suffix *-are* is mostly found with the noun *kx'aro* 'boy' as illustrated in examples (5.16 a-b).

- (5.16) a. *lJoana k'aro-are tire mũũ-a-ha.*
joana k'aro-are tire mũũ-a-ha
 three boy-pl 1sg see-J-PRF
 I saw three boys.

- b. *Ti kua ii karo-are khae-tcu-kaxu.*
ti kua ii karo-are khae-tcu-kaxu
 1sg IPFV DEM boy-pl fight-REC-CAUS
 I am making the boys fight.

The suffix *-rera* is found predominantly with the noun *lũã* 'child'. It is possible that the plural marker *-rera* is a combination of the suffixes *-re* and *-ra*.

- (5.17) a. *lũã-rera kua karo pee.*
lũã-rera kua karo pee
 child-pl IPFV stone jump
 The children jump over the stone.
- b. *lũã-rera kua djii-ra ?abo-kaa.*
lũã-rera kua djii-ra ?abo-kaa
 child-pl IPFV tree-pl climb-VOL

The children like climbing trees.

In one example, the plural suffix marker *-rera* was also found with the noun *kx'oo.xo.laa* 'pregnant animal' (lit. 'bellied animal'):

- (5.18) a. *Ii k'oo.xo.laa-rera kua.nya kae.tca-tco-re kua.nya kae.*
ii k'oo.xo.laa-rera kua.nya kae.tca-tco-re kua.nya kae
 DEM pregnant.animal-**pl** FUT hunt-AG-pl FUT arrest
 Hunters who will kill pregnant (lit. bellied) animals will be arrested.

Apart from the suffixes *-ra* and *-re*, Tjwao has an additional suffix *-ro* which can also be attached to nouns to mark plural. The suffix *-ro* is only found with [+human] nouns, for instance, *kx'ao.tco-ro* 'men' and [-human] nouns for instance, *kare-ro* 'feet'. This suffix is also found in other related languages, for example, Hiechware (Dornan 1917: 72), Glabak'e (Westphal 1961) and Tcire-tcire (Fehn and Phiri 2017: 115). At this stage, it is not clear whether *-ro* traces back to a defunct dual marker (compare, e.g., Güldemann 2004 for discussion of a dual formative **-do*) or serves another purpose linked to sentence type or information structure.

- (5.19) a. *Kx'ao.tco-ro lxoo-ha tcxaru kaa*
kx'ao.tco-ro lxoo-ha tcxaru kaa
 man-**pl** dry:J-PRF firewood collect.firewood
 The men collect dried firewood.

- b. *Ti kare-ro kua thũũ.*
ti kare-ro kua thũũ
 1sg.GEN foot-**pl** IPFV hurt
 My feet hurt.

In cases where the head noun is not the last element of the noun-phrase, the plural marker may attach to the last element, which may be a numeral or the possessive marker *de*. If the numeral follows a noun in a modifying noun-phrase, it receives the plural marker *-ra* or *-re* (ex. 5.20a-b). Conversely, if the numeral quantifier comes before the noun it modifies, the plural marker is optional as illustrated in example (5.20c). In some cases, if the noun-phrase includes a possessive modifier *de* and the numeral precedes the noun, the plural marker *-re* is attached to

the possessive (see ex. 5.20d-e). However, this is optional and does not occur in all attested cases involving the possessive *de* (see ex. 5.120f).

(5.20) a. *Ii lĩã ŋuna-re kua kwele o kũũ.*

ii lĩã ŋoana-re kua kwele o kũũ
DEM child three-pl IPFV school LOC go

These three children are going to school.

b. *Baare ŋunaŋoana ndjuu-ra ua.na*

baare ŋoana ndjuu-ra ua.na
my.father three house-pl have

My father has three houses.

c. *lAm mini kua dao k'are ti tcaa.xu de.*

lAm mini kua dao k'are ti tcaa.xu de
two goat IPFV road cross 1sg.GEN brother POSS

The two goats crossing the road are my brother's.

d. *lAm mota ti de-re lʔoo-ha.*

lAm mota ti de-re lʔoo-ha
two car 1sg **POSS-pl** die:J-PRF

My two cars are broken.

e. *Glee.xu ka sam ʔe.ce de-ra lx'aa.*

glee.xu ka sam ʔe.ce de-ra lx'aa
woman ANT breast 3sg.F.NOM **POSS-pl** wash

The woman washed her breasts.

f. *lAm mota k'aotco de lʔoo-ha.*

lAm mota k'aotco de lʔoo-ha
two car man **poss** die:J-PRF

The man's two cars are broken.

5.4 Nominal Modifiers

Nominal modifiers attested in Tjwao are demonstratives, possessives, numerals and quantifiers, adjectives, and relative clauses. All modifiers will be addressed individually, and in detail in the following sections. In Tjwao, each head noun can take one preceding modifier as illustrated in examples (5.21a-c).

- (5.21) a. *lAm dana.tco-ra kua Tjwao kx'ui.*
lam dana.tco-ra kua Tjwao kx'ui
two girl-pl IPFV Tjwao speak
 The two girls are speaking Tjwao.

- b. *Ii tshaa kua tsãã.*
ii tshaa kua tsãã
DEM.prox water IPFV hot
 This water is hot.

- c. *Ti kua gloo xore o kũũ.*
ti kua gloo xore o kũũ
 1sg IPFV **big lake** DIR go
 I go to a big lake.

Tjwao does not allow for more than one modifier to precede the head. According to this constraint, additional modifiers must be encoded as what may be either interpreted as appositional construction or relative clause (e.g., for 5.22a: ‘my children, the three ones’ or ‘my children, who are three’).⁶⁹ If the modifier that follows the head noun is a possessor noun, it is marked with *de* as illustrated in example (5.22b).

- (5.22) a. **Possessor+HEAD+NUM/ADJ**
Tire ʔe.ba boori-na-hĩ ti lua-re ʔoana ka.
tire ʔe.ba boori-na-hĩ ti lua-re ʔoana ka
 1sg 3sg.M tell-J-PST **1sg child-pl three** MPO
 I told you about my three children.

⁶⁹ For the time being this cannot be explained in detail and must be considered a topic of future research.

b. NUM/ADJ+HEAD+Possessor di-e/-re

lam mota ti de-re lʔoo-ha.

<i>lam</i>	<i>mota</i>	<i>ti</i>	<i>de-re</i>	<i>lʔoo-ha</i>
two	car	1sg	POSS-pl	die:J-PRF

My two cars are broken.

c. NUM+HEAD-pl+ADJ ʔe

Tire lam mota-ra ua.na lʔaa ʔe.

<i>tire</i>	<i>lam</i>	<i>mota-ra</i>	<i>ua.na</i>	<i>lʔaa</i>	<i>ʔe</i>
1sg	two	car-pl	have	new	COP

I have two new cars.’ (lit. I have two cars which are new.)

d. DEM+HEAD+NUM/ADJ-e/-re

Ii lʔũũ ɲuana-re kua kwele o kũũ.

<i>ii</i>	<i>lʔũũ</i>	<i>ɲuana-re</i>	<i>kua</i>	<i>kwele</i>	<i>o</i>	<i>kũũ</i>
DEM	child	three-pl	IPFV	school	DIR	go

These three children are going to school.

5.4.1 Demonstratives

Demonstratives have two main functions: First, they have a deictic function, namely, pointing to an object present in the context. Secondly, they have an anaphoric function, referring to an object already introduced in the discourse. Two deictic demonstratives are found in Tjwao: the proximal *ii* and the distal *uu*. In addition, Tjwao has a proximal demonstrative *ne*, which only appears in pronominal contexts and seems to predominate in presentative clauses (‘this is X’). The anaphoric demonstrative⁷⁰ most frequently attested in Tjwao is *xa*⁷¹. Another anaphoric demonstrative, *ĩĩ*, is less frequent and more data will be needed to determine its exact function. While adnominal demonstratives are never marked for person, gender, or number, the distal demonstrative *uu* appears with the suffixes of the third person when used in pronominal contexts. In the following, the individual demonstratives and their frames of usage will be discussed.

⁷⁰ Anaphoric demonstratives “are used to track participants of the previous discourse” (cf. Diessel 1999: 96).

⁷¹ It seems that the demonstrative *xa* is only attested in Tjwao and it does not exist in other varieties of Tshwa and Shua group (Vossen 2013).

The proximal demonstrative *ii* conveys the notion of ‘this’, meaning the object signified is close to the speaker. In examples (5.23a-c), the nouns *lũã* ‘child’, *kx’oo.xo* ‘meat’ and *kx’aro* ‘boys’ follow the demonstrative *ii* which acts as the modifier.

(5.23) a. *Ii lũã ŋuna-re kua kwele o kũũ.*

<i>ii</i>	<i>lũã</i>	<i>ŋoana-re</i>	<i>kua</i>	<i>kwele</i>	<i>o</i>	<i>kũũ</i>
DEM.prox	child	three-pl	IPFV	school	LOC	go

These three children are going to school.

b. *Ii kx’oo.xo kaxu ka ll’xum-a-xu.*

<i>ii</i>	<i>kx’oo.xo</i>	<i>kaxu</i>	<i>ka</i>	<i>ll’xum-a-xu</i>
DEM.prox	meat	knife	with	cut-J-COMPL

Cut this meat with a knife.

c. *Ii kx’aro kua kobo-se kũũ.*

<i>ii</i>	<i>kx’aro</i>	<i>kua</i>	<i>kobo-se</i>	<i>kũũ</i>
DEM.prox	boy	IPFV	slow-ADVZ	go

This boy is walking slowly.

While *ii* mostly appears in adnominal deictic contexts, the example below suggests that when used pronominally, *ii* may also have an anaphoric function (see ex. 5.24a). “While the referents encoded or accompanied by anaphoric demonstratives have appeared in the preceding discourse, they are “somewhat unexpected” and “not currently in the focus of attention”” (Fehn 2016: 102). In Tjwao, anaphoric *ii* is found changing the nominal referents that were introduced in the previous sentence.

(5.24) a. *Ã-ã, xa.ta ii bee.*

<i>ã-ã,</i>	<i>xa.ta</i>	<i>ii</i>	<i>bee</i>
INTJ	like.that	DEM	NEG

Ã-ã, it is not like that.

The demonstrative *uu* signifies ‘that’ in Tjwao. This demonstrative is used when referring to objects that are further away from the speaker (ex. 5.25a-b). The demonstrative *uu* can also be used to refer to temporal deixis, as exemplified in example (5.25c).

(5.25) Distal- *uu*

a. *Uu tsxua tsu.nye.*

uu *tsxoa* *tsu.nye*
DEM elephant small:COP

That elephant is small.

b. *Ti kua uu xam.ra mĩũ uu xam.ra kua tshaa kx'aa-se.*

Ti kua uu xam-ra mĩũ uu xam-ra kua tshaa kx'aa-se
 1sg IPFV **DEM** lion-pl see DEM lion-pl IPFV water Drink-adv

I see those lions drinking water.

c. *Uu ngee-ta nloe tire kwelo o kũũ-tam-hĩ, ti kua ka tcii.*

uu *ngee-ta* *nloe* *tire* *kwelo* *o* *kũũ-tam-hĩ,*
DEM pass-ref month 1sg school LOC go-NEG- PST
ti kua ka tcii
 1.sg IPFV ANT be.sick

Last month (lit. past month), I did not go to school because I was sick.

The two deictic demonstratives *ii* and *uu* can be used contrastively. For example, if there are two objects, and one is close to the speaker and the other is more distant, the speaker will use the demonstrative *ii* to refer to the object that is close by, and the demonstrative *uu* to refer to the object that is further away (see ex. 5.26a-b). Additionally, the examples below show that both *ii* and *uu* can be used as pronouns.

(5.26) a. *Ii mini ʔe tsu.nye uu e gloo-e.*

ii *mini* *ʔe* *tsu.nye* **uu** *ʔe* *gloo* *ʔe*
DEM goat 3sg.c small:COP **DEM** 3sg.c big COP

This goat is small and that one is big.

b. *Uu mbuta tsu.nye ii ʔe gloo ʔe.*

uu *mbuta* *tsu.nye* *ii* *ʔe* *gloo* *ʔe*
DEM hare small:COP **DEM** 3sg.C big COP

That hare is small and this one is big.

There is also one example in the dataset in which *uu* appears with the suffix for the third person singular nominative *-ce*, replacing the distance neutral pronoun base *ʔe* (ex. 5.27).

(5.27) a. *Uu-ce ma ti mare ka ʔae wa hãã.*

uu-ce *ma* *ti* *mare* *ka* *ʔae* *a* *hãã*
DEM-3sg.F QUOT 1sg mother ANT house LOC be.there

That one (female) said mother was in the house.

A further deictic demonstrative attested in Tjwao is *ne*. This form may be cognate with the proximal demonstrative *něě* ‘this, these’, which occurs in Khoekhoe (cf. Haacke and Eiseb 2002: 98). *Ne* exclusively appears in pronominal contexts and is restricted to presentative clauses (ex. 5.28a-c).

(5.28) *ne*

a. *Ne ti dzãã ʔe.*

ne *ti* *dzãã* *ʔe*
DEM 1sg friend COP

This is my friend.

b. *Ne ti tcaa.xu ʔe.*

ne *ti* *tcaa.xu* *ʔe*
DEM 1sg brother COP

This is my brother.

c. *Ne ti djibe-re.*

ne *Admire-be*
DEM PNsg.M

This is Admire.

The anaphoric demonstrative *xa* is used to refer to an entity that has previously been described in the discourse. To be exact, it is used to emphasise and mark definitiveness, whose identity is specified or known by either speaker or hearer (see ex. 5.29a-c).

(5.29) *xa*

a. *Xa xo tire ʔana-ha.*

xa xuu tire ʔana-ha

DEM thing 1sg know-J-PRF

I knew it.

b. *Xa tcatco.re xa |ũã |ʔun maa-ha.*

xa tca.tco-re xa |ũã |ʔun maa-ha

DEM elder-pl **DEM** child name give:J-PRF

The elders have given the child a name.

c. *Xa tshaa kua ka tsãã.*

xa tshaa kua ka tsãã

DEM water IPFV ANT hot

The water was hot.

Xa can also be used as a pronoun base with the discourse-referential suffix *-ta*, conveying the notion of ‘like that’ as illustrated in the example below.

(5.30) *Ã-ã, xa-ta ii be.*

ã-ã, xa-ta ii be

INTJ **DEM-REF** **DEM** **NEG**

Ã-ã, it is not like that.

The data includes a further anaphoric demonstrative *ĩ*, which is only featured in a small number of examples (ex. 5.31a-b) and therefore does not allow one to draw a conclusion on its exact semantic coverage.

(5.31) a. *ʔE.ce ĩ maa tcoro-ha*

ʔe.ce ã maa tcoro-ha.
 3sg.F.NOM **DEM** mother cure:J-PRF
 She cured the mother.

b. *Ïĩ kx'ao.tco ʔe.be kua ti kx'ui kx'ui.*

Ïĩ kx'ao.tco ʔe.be kua ti kx'ui kx'ui
DEM man 3sg.M.NOM IPFV 1sg language speak
 The man speaks my language.

Like *xa*, *ã* may also be used as a pronoun base with the discourse-reference marker *-ta* as illustrated in example (5.32) below.

(5.32) *|li kua ka ã-ta nglæ.*

lii kua ka ã-ta n|glæ
 song IPFV ANT **DEM-REF** sing
 The song was sung like this.

The demonstratives of Tjwao are summarised in Table 7 below:

Table 7: Adnominal and Pronominal Demonstratives of Tjwao

			Adnominal	Pronominal
Deictic	Proximal	ii	✓	✓
	Distal	uu	✓	✓
	Proximal	ne	---	✓
Anaphoric		xa	✓	✓
		ã	✓	✓

5.4.2 Adjectives

Tjwao normally has four semantic core forms associated with adjectives. These are dimension, age, value, and colour (cf. ex. 5.33a-d).

- (5.33) a. Dimension (*kao* ‘long’, *gloo* ‘big’, *tsũĩ* ‘small’)
 b. Age (*nlgao* ‘old’, *lʔaa* ‘new’)
 c. Value (*t’ũĩ* ‘good’, *djaa* ‘correct’, *lx’an* ‘bad’)
 d. Colour (*loa* ‘red’, *xue* ‘white’, *mangungu* ‘yellow’>(Kalanga), *ntsuu* ‘black’, *ts’abe* ‘green, blue’)

Apart from the four listed above, Tjwao has three peripheral semantic forms usually found with medium-sized and large adjective classes (ex. 5.34a-b). In addition, there is another class which is represented by an antonymic pair (near or far). This class type is more peripheral, and it is referred to as position (see ex. 5.34c). Most other adjectives belong to the physical property type. There are two adjectives borrowed from Kalanga, namely, *canga* ‘dirty’ and *mangungu* ‘yellow’.

- (5.34) a. Physical Property (*kum* ‘hard’, *tcxari* ‘smooth’, *cubu* ‘soft’, *lxuru* ‘cold’, *kx’au* ‘bitter’)
 b. Human Propensity (*ʔabu* ‘happy’, *xãĩ* ‘angry’)
 c. Position (*luu* ‘near’, *nguu* ‘far’)

Adjectives may be used attributively, that is, they occur before the noun they qualify. As illustrated in the example below, the attributive adjectives *gloo* ‘big’ (5.35a), *tsũĩ* ‘small’ (5.35b), *lxuru* ‘cold’ (5.35c), *loa* ‘red’ (5.35d) and *lʔaa* ‘new’ (5.35e) precede their head nouns.

- (5.35) a. *Tire gloo gee tcum lx’are-ha.*
tire **gloo** *gee* *tcum* *lx’are-ha*
 1sg **big** **cow** COM meet:J-PRF
 I met a big cow.
- b. *Maare tsũĩ tcuba ua.na.*
maare **tsũĩ** *tcuba* *ua.na.*
 my.mother **small** **field** have
 My mother has a small field.
- c. *lXuru tshaa tire kx’aa-ha.*

<i>lxuru</i>	<i>tshaa</i>	<i>tire</i>	<i>kx'aa-ha</i>
cold	water	1sg	drink:J-PRF

I drank cold water.

d. *lOa gee lʔoo-ha.*

<i>loa</i>	<i>gee</i>	<i>lʔoo-ha</i>
red	cow	die:J-PRF

The red cow died.

e. *Tcoa.n lʔaa ndjuu lʔan.*

<i>tcoa.n</i>	<i>lʔaa</i>	<i>ndjuu</i>	<i>lʔan</i>
1pl.C.GEN	new	house	build

Let us build a new house!

When genuine adjectives are used predicatively, they act as complements of a copula construction (ex. 5.36). This form of construction is limited to the representation of states. Change of state ('become X') must be encoded in a verbal clause (Chapter Six).

(5.36) a. *Karo kari ʔe.*

<i>karo</i>	<i>kari</i>	<i>ʔe</i>
stone	hard	COP

The stone is hard.

b. *Xa yembe lʔaa ʔe.*

<i>xa</i>	<i>yembe</i>	<i>lʔaa</i>	<i>ʔe</i>
DEM	shirt	new	COP

This shirt is new.

c. *li gee loa ʔe.*

<i>li</i>	<i>gee</i>	<i>loa</i>	<i>ʔe.</i>
DEM	cow	red	COP

This cow is red.

d. *ʔE.ci tcoo ʔe kari.se kx'obo ʔe.*

<i>ʔe.ci</i>	<i>tcoo</i>	<i>ʔe</i>	<i>kari.se</i>	<i>kx'obo</i>	<i>ʔe</i>
3sg.F.GEN	skin	3sg.C	INTENS	soft	COP

Her skin is very soft.

e. *ʔE.m n|ũũ.tc 'um ʔe g|oo ʔe.*

<i>ʔe.m</i>	<i>n ũũ.tc 'um</i>	<i>ʔe</i>	<i>g oo</i>	<i>ʔe</i>
3sg.M.GEN	chin	3sg.C	big	COP

His chin is big.

Apart from the genuine word class of adjectives discussed above, Tjwao may use verbs with the perfect suffix *-ha* in an adjectival function. Examples include accomplishment verbs like *lxoo* ‘become dry’, and *laba* ‘become hungry’. When the suffix *-ha* is attached to verbs used in adjectival function, it is a pure perfect aspect. This means that it is tenseless and does not make any reference to the point in time when the resulting condition was achieved. Like proper adjectives, states derived with *-ha* can be used in attributive (ex. 5.37a) as well as in predicative function (ex. 5.37b). State verbs used as nominal modifiers preceding the head noun may alternatively be analysed as relative clauses (ex. 5.37a).

(5.37) a. *Kx'ao.tco-ro lxoo-ha tcxaru kaa.*

<i>kx'ao.tco-ro</i>	<i>lxoo-ha</i>	<i>tcxaru</i>	<i>kaa</i>
man-pl	dry:J-PRF	firewood	collect.firewood

The men collect dry wood.

b. *Vundla-be xu.djoe laba-ha.*

<i>Vundla-be</i>	<i>xu.djoe</i>	<i>laba-ha</i>
Vundla-sg.M	still	hungry:J-PRF

Vundla is still hungry.

The intensifier adverb *kari.se* ‘very, very much’ can optionally be used to put emphasis on the adjective. *Kari.se* always precedes the adjective it modifies. In reference to Khoekhoe, Hagman (1977: 33) terms this use of *kari.se* as ‘augmentative’.

- (5.38) a. *Ii mbutaa karise tsu.nye.*
ii mbutaa kari.se tsu.nye
 DEM hare very small:COP
 ‘This hare is very small.’

- b. *Kari.se kum e karo-luu a ʔabo.*
kari.se kum ʔe karo-luu a ʔabo
 INTENS hard COP stone-top LOC climb
 ‘It is very difficult to climb a rock.’

5.4.3 Possessives

Tjwao has both attributive and predicative possessive constructions which differ structurally. An attributive possessive construction consists of a possessor (the modifier) and a possessee (the head) which form a noun-phrase together. Predicative possessives (‘have X’) are formed with the possessive copula *ua.na*, and its negative counterpart *ua.na.be*⁷² or the synonymous *wana.m*. The expression of attributive and predicative possession in Tjwao does not involve a differentiation between alienable (e.g., objects) and inalienable possesseees (e.g., body parts, relatives).

5.4.3.1 Attributive Possession

The most frequent type of attributive possessive construction in Tjwao consists of a pronominal possessor and a nominal possessee. Tjwao does not have a dedicated series of possessive pronouns but uses its dependent genitive pronouns as introduced in Table 6. Examples (5.39a-e) illustrate the possessive pronouns which are used attributively. They precede the head nouns they modify.

- (5.39) a. *Ti koloji ʔe ʔoo-ha.*
ti koloji ʔe ʔoo-ha
 1sg.GEN car 3sg.C die:J-PRF
 My car is dead.

⁷² Pronounced *ʔana.be* by some speakers. In this grammar, the spelling *wana.be* is retained throughout for reasons of convenience.

b. *Ne tca maa ʔe.*

<i>ne</i>	<i>tca</i>	<i>maa</i>	<i>ʔe</i>
DEM	2sg.M.GEN	head	COP

This is your head.

c. *Xa ʔe ʔe.m lii.*

<i>xa</i>	<i>ʔe</i>	<i>ʔe.m</i>	<i>lii</i>
DEM	COP	3sg.M.GEN	song

This is his song.

d. *ʔE.ce ʔe.ci dama.xu ʔui.ka müũ-a-hĩ.*

<i>ʔe.ce</i>	<i>ʔe.ci</i>	<i>dama.xu</i>	<i>ʔui.ka</i>	<i>müũ-a-hĩ</i>
3sg.F.NOM	3sg.F.GEN	younger.sibling	yesterday	see-J-PST

She saw her younger sister yesterday.

e. *Ne tcoa.n baa ʔe.*

<i>ne</i>	<i>tcoa.n</i>	<i>baa</i>	<i>ʔe</i>
DEM	1pl.C.GEN	father	COP

It's our father.'

In some cases the third person common gender plural *ʔe.na* and *ʔe.n* can be accepted as illustrated in examples (5.40a-b).

(5.40) a. *ʔE.na ndjuu-re gai-|uu a hãã.*

<i>ʔe.na</i>	<i>ndjuu-re</i>	<i>gai- uu</i>	<i>a</i>	<i>hãã</i>
3sg.C.GEN	house-pl.NOM	hill-top	LOC	be.there

Their houses are on top of the hill.

b. *Maa-re kua ʔe.n kx'ai-o lxaa.*

<i>maa-re</i>	<i>kua</i>	<i>ʔe.n</i>	<i>kx'ai.o</i>	<i>lxaa</i>
woman-pl.NOM	IPFV	3pl.C.GEN	face	paint

Women are painting their faces.

Both possessor and possessee may be nouns as illustrated in examples (5.41a-c) or noun-phrases as shown in examples (5.41d-f). If the possessor is a personal name, it is commonly marked for the third person in the genitive case (ex. 5.41a).

(5.41) a. *Vundla-m koloji ʔe t'u.nye.*

Vundla-m koloji ʔe t'u.nye
PN-sg.M.GEN car 3sg.C be.good:COP
 Vundla's car is good.

b. *Mbuta |ʔũũ ʔe kx'obo ʔe.*

mbuta |ʔũũ ʔe kx'obo ʔe.
hare fur 3sg.C soft COP
 The fur of the hare is soft.

c. *Gee n||ãã-ra ti kua ʔao.*

gee n||ãã-ra ti kua ʔao
cattle horn-pl.ACC 1sg IPFV fear
 I am afraid of the bull's horns.

d. *Uu dzira |ʔũũ ʔe t'unye.*

uu dzira |ʔũũ ʔe t'unye
DEM.dist bird feather 3sg.C beautiful:COP
 That bird has beautiful feathers.

e. *Ti baa mini tsu.nye.*

ti baa mini tsu.nye
1sg.GEN father goat small:COP
 My father's goat is small.

f. *Ti baa koloji t'u.nye.*

ti baa koloji t'u.nye
1sg.GEN father car good:COP
 My father's car is good.

In Tjwao, it is possible to front the possessee. In these cases, the possessor pronoun, noun, or noun-phrase is always followed by the possessive marker *de*.⁷³ This construction type is primarily used when the focus is on the possessee in contrast to a possessor already known within the discourse (ex. 5.42a-c). It semantically approaches the English possessive construction “X of mine/yours etc.”

(5.42) a. *Maa ti de kua kara.*

<i>maa</i>	<i>ti</i>	<i>de</i>	<i>kua</i>	<i>kara</i>
head	1sg	POSS	IPFV	hurt

The head of mine hurts.

b. *Kx'ao mini ti de ʔui.ka ʔoo-hĩ.*

<i>kx'ao</i>	<i>mini</i>	<i>ti</i>	<i>de</i>	<i>ʔui.ka</i>	<i>ʔoo-hĩ</i>
male	goat	1sg	POSS	yesterday	die:J-PST

The male goat of ours died yesterday.

c. *ʔe.ce kua ka xa kx'ao.tco ʔe.ci de glam.*

<i>ʔe.ce</i>	<i>kua</i>	<i>ka</i>	<i>xa</i>	<i>kx'ao.tco</i>	<i>ʔe.ci</i>	<i>de</i>	<i>glam</i>
3sg.F.NOM	IPFV	ANT	DEM	man	3sg.F.GEN	POSS	love

She loved that man of hers.’

When the possessee is marked for plural, the plural suffix attaches to the particle *de*. The case form of the plural marker corresponds to the syntactic role of the possessive noun-phrase.

(5.43) a. *ʔam mota ti de-re ʔoo-ha.*

<i>ʔam</i>	<i>mota</i>	<i>ti</i>	<i>de-re</i>	<i>ʔoo-ha</i>
two	car	1sg	POSS-pl.NOM	die:J-PRF

The two cars of mine are broken.

b. *ʔoana ʔxaba ʔe.ci de-re tcũã-na-hĩ ʔui.ka.*

<i>ʔoana</i>	<i>ʔxaba</i>	<i>ʔe.ci</i>	<i>de-re</i>	<i>tcũã-na-hĩ</i>	<i>ʔui.ka</i>
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⁷³ Some speakers use /de/ instead of /di/. /i/ and /e/ are variants. This analysis will use /de/ for the sake of uniformity.

three rib 3sg.F.GEN POSS-pl.NOM break-J-PST yesterday
 Three ribs of hers broke yesterday.

Possessee modified by numerals or other quantifiers require this specific construction type. When the numeral modifies the head noun, the particle *de* sometimes does not require the plural marker as illustrated in example (5.44) below.

- (5.44) a. *lam mota kx'ao.tco de llʔoo-xa.*
lam mota kx'ao.tco de llʔoo-xa
two car man POSS die:J-PRF
 The man's two cars are broken.

Independent possessors, that is, possessors with an unstated possessee, are also formed with the possessive particle *de* (ex. 5.44a-c). Like in the other possessive constructions, a noun, pronoun, or noun-phrase may be the possessor, and the possessive construction may be marked for plural (ex. 5.45c).

- (5.45) a. *Dube llxao lʔaa ʔe, ʔa.ka Vundla-m de nllgao-ha.*
Dube llxao lʔaa ʔe, ʔa.ka Vundla-m de nllgao-ha
 PN spear new COP but **PN-sg.M POSS old:J-PRF**
 Dube's spear is new, Vundla's is old.

- b. *lam mini kua dao kx'are ti tcaaxu de.*
lam mini kua dao kx'are ti tcaaxu de.
two goat IPFV road cross 1sg brother POSS
 The two goats crossing the road are my brother's.

- c. *Ii ndjuu ʔoana ʔe baa(n) de-ra.*
ii ndjuu ʔoana ʔe baa(n) de-ra
DEM.prox house three COP father POSS-pl.ACC
 These three houses are my father's.

5.4.3.2 Predicative Possession

The expression of predicative possession in Tjwao corresponds to Stassen’s (2013) “have-possessive”. The construction resembles a transitive predicate involving a fossilised verb form *ua.na* ‘to have’ (ex. 5.46 a-b). The possessor is treated like the subject of a transitive clause and receives nominative case marking (ex. 5.46c-e). The possessee is treated like the object and hence receives accusative case marking whenever applicable (e.g., with plural markers, personal names) (ex. 5.46f).

(5.46) a. *Ti baa tsũĩ mini ua.na.*

<i>ti</i>	<i>baa</i>	<i>tsũĩ</i>	<i>mini</i>	<i>ua.na</i>
1sg.GEN	father	small	goat	have

My father has a small goat.

b. *Glee.lũã tsũĩ kx’am wana.*

<i>glee.lũã</i>	<i>tsũĩ</i>	<i>kx’am</i>	<i>ua.na</i>
girl	small	mouth	have

The young girl has a small mouth.

c. *ʔE.be mari ua.na.*

<i>ʔe.be</i>	<i>mari</i>	<i>ua.na</i>
3sg.M.NOM	money	have

He has money.

d. *|Ui |ũã ʔe.ce ua.na.*

<i> ui</i>	<i> ũã</i>	<i>ʔe.ce</i>	<i>ua.na</i>
one	child	3sg.F.NOM	have

She has (only) one child.

e. *Kx’ao.tco-re kx’oo.xo ua.na.*

<i>kx’ao.tco-re</i>	<i>kx’oo.xo</i>	<i>ua.na</i>
man-pl.NOM	meat	have

The men have the meat.

f. *Baa.re ηuana ndjuu-ra ua.na.*

baa.re ηoana ndjuu-ra ua.na

my.father three house.pl.ACC have

My father has three houses.

The data contains two different negation strategies used in predicative possessive constructions: one involving the negation suffix *-m*, and the other involving the negation suffix *-be*. There appears to be no difference between *ua.na-m* (ex. 5.47a-c) and *ua.na-be* (ex. 5.47d-f); they are full synonyms. The variation attested in the corpus seems to be idiolectal.

(5.47) a. *Mari ?e.be ua.na-m.*

mari ?e.be ua.na-m

money 3sg.M.NOM have-NEG

He does not have money.

b. *Ndjuu ?e.be ua.na-m.*

ndjuu ?e.be ua.na-m

house 3sg.M.NOM have-NEG

He does not have a house.

c. *Glee.tco ?e.be ua.na-m.*

glee.tco ?e.be ua.na-m

wife 3sg.M.NOM have-NEG

He does not have a wife.

d. *Tire mari ua.na-be.*

tire mari ua.na-be

1sg money have-NEG

I have no money.

e. *Tcoa.re n|gui ua.na-be.*

tcoa.re n|gui ua.na-be

1pl.C.NOM oil have-NEG

We do not have oil.

5.4.4 Numerals and Quantifiers

Like other Kalahari Khoe languages, Tjwao displays a restricted numeral system, consisting of only three monomorphemic cardinal numbers: *lui* ‘one’, *lam* ‘two’ and *ɲuana* ‘three’.⁷⁴ The evidence shows that *lui* ‘one’ is rarely used as a number, that is, one. It mostly coincides with the meaning ‘only’ (ex. 5.48b).

- (5.48) a. *Ti kua lui tsxoā lui ti kua mĩũ.*
ti kua lui tsxoā mĩũ
 1sg IPFV **one** elephant see
 I see one elephant.

- b. *Ui lĩũ ʔe.ce ua.na.*
lui lĩũ ʔe.ce ua.na
one child 3sg.F have
 She has only one child.

The evidence suggests that *lam* ‘two’ and *ɲuana* ‘three’ are the most common numbers used as modifiers (ex. 5.49). If a noun modified by numerals *lam* ‘two’ and *ɲuana* ‘three’ acts as a possessee in a possessive noun-phrase, the possession marker *de* needs to be employed, as described above (ex. 5.42, 5.43).

- (5.49) a. *Ti kua lam tsxoā.ra mĩũ.*
ti kua lam tsxoā-ra mĩũ
 1sg IPFV **two** elephant-pl.ACC see
 I see two elephants.
- b. *Doana kx'aro-are tire mĩũ-a-ha.*
ɲoana kx'aro-are tire mĩũ-a-ha
three boy-pl 1sg see-J-PRF

⁷⁴ Dornan (1925: 61) notes that the San people from the Tati River, probably a group closely related to the Tjwao, did not have numbers beyond three. He assumes that since they were hunter-gatherers, they had no domestic animals to count and hence did not need a complicated numeral system.

I saw three boys.

Numerals *buna* ‘four’, *bucanu* ‘five’ and *gume* ‘ten’ are borrowed from Kalanga. Formally, they diverge from genuine Tjwao lexical roots in having a trimoraic CVCVCV structure. Syntactically, however, they behave the same as inherited Tjwao numerals.

- (5.50) a. *Buna khee-ra ti kua ʔãĩ kaa.*
***buna** khee-ra ti kua ʔãĩ-kaa.*
four sugarcane-pl.ACC 1sg IPFV buy-want
 ‘I want to buy four sugar canes.’

The cardinal number six is conveyed by *gʌoo.tha.lxore*, while the numbers seven to nine are expressed as complex nominal compounds. For example, *ʌui-tshau-xuu* ‘nine’ may be analysed *ʌui* ‘one’ + *tshau* ‘hand, finger’ + *xuu* ‘to leave’, and should probably be interpreted as ‘leave one finger out’.⁷⁵ The same strategy was applied in *ʌam-tshau-xuu* ‘eight’. The etymology of *ʌaa-nʌaa-tcee* ‘seven’ is presently unknown.

- (5.51) a. *gʌoo.tha.lxore* ‘six’
 big-?-nail
 b. *ɲuana-tshau-xuu* ‘seven’?
 three-finger-leave
 c. *ʌAm-tshau-xuu* ‘eight’
 two-finger-leave
 d. *ʌUi-tshau-xuu* ‘nine’
 one-finger-leave

Tjwao speakers do not refer to a ‘baboon hand’ to express the numeral ‘five’; this comparison is otherwise a common feature of Kalahari Khoe languages from the Eastern Kalahari Basin fringe (cf. Ts’ixa, Fehn 2016).

⁷⁵ When the speakers were asked to demonstrate how to count to nine using their fingers, they would fold all the fingers of both hands and leave one unfolded or open their hands and fold one finger.

When counting above ten, Tjwao adopts the common counting strategy used in Kalanga languages: numbers between one and nine are combined with *gume* ‘ten’, which they precede. The two numbers are added, for instance, *gume-lui-e* ‘it is ten and one’, that is, ‘eleven’, and *gume-ɲuana-e* ‘thirteen’. If the number *gume* ‘ten’ is followed by a number between one and nine, the two are multiplied, for instance, *lam gume* ‘twenty’ *buna gume* ‘forty’.⁷⁶

Tjwao numerals can be used as numerical adverbs by adding the suffix *-ndje* ‘times’ of Bantu origin.

- (5.52) a. *lam-ndje ʔe.tsara khae.tcu-na-hĩ.*
lam-ndje ʔe.tsara khae-tcu-na-hĩ
two-times 3du.M fight-RCPR-J-PST
 They fought twice.

- b. *ɲoana-ndje-se ce ʔyũũ.*
ɲoana-ndje-se ce ʔyũũ
three-times-ADV 2sg.F eat
 You should eat three times per day.

Rarely, the adverbialiser *-se* is used to derive a numerical adverb. This is illustrated in (5.53) where *-se* is attached to *ɲoana* ‘three’. This construction possibly constitutes a genuine Tjwao strategy, contrary to that of *ndje* discussed above.

- (5.53) *Kx’ao.huku ɲoana-se kx’ee-a ku-kuru-ku ta mii-se Mwari.are tan-a-hĩ.*
kx’ao.huku ɲoana-se kx’ee-a ku-kuru-ku ta mii-se
 cock **three-ADV** cry-? ONO COMPL say-ADV
Mwari.are tan-a-hĩ
 Jesus get.up-J-PST
 The cock cried three times ku kuru ku Jesus rose up.

⁷⁶ Writing about Khoekhoe, Hagman (1977: 35) notes that the formation of large numbers follows a formula, not grammatical rule. Consequently, the formula makes part of the lexicon of the language and reflects the “mathematical technology” of the speaker (Ibid. 35).

In a formally similar construction, the numeral ‘one’ may be combined with the adverbialising clitic *-se* to derive the meaning ‘alone’: (see ex. 5.54a-b).

- (5.54) a. *Ndlovu.be lui-se kũũ-a-ha ka dolobo.*
Ndlovu-be lui-se kũũ-a-ha ka dolobo
 Ndlovu-sg.M.NOM **one-ADV** go-J-PRF ANT town
 Ndlovu went to town alone.

- b. *Tca lui-se ha ka tca kua nao hĩ.*
tca lui-se xa.ka tca kua nao hĩ?
 2sg.M **one-ADV** if 2sg.M IPFV what do
 If you are alone, what do you do?

lui ‘one’ may appear with a suffix *-xa* to derive an adjective with the meaning ‘only’ (ex. 5.55). *-xa* is attested in other Kalahari Khoe languages, where it functions as an adverbialiser (Kilian-Hatz 2008 for Khwe) or adjectiviser (Fehn 2016 for Ts’ixa), but no corresponding data exists for Tjwao.

- (5.55) *Tcatco.re lui xa kua kaetja o kũũ ka.*
tca.tco-re lui.xa kua
 adult-pl.NOM **only** IPFV
 Only adults can hunt.

In addition to the numerals discussed above, Tjwao has four non-numeric quantifiers, namely, *ʔii.ye/ʔii.re/ʔii.ra* ‘all, some, other’ *lxara* ‘many’, *tsũũ* ‘few, small’ and *lx’oa* ‘be few’. A quantifier of the form *ʔii.ye* exists in several Eastern Kalahari Khoe languages (Vossen 2013) with the meaning ‘all’. In Tjwao, it also covers the notions of ‘some’ and ‘other’. However, the semantic difference is reflected by the two differentiated construction schemes presented below:

- (a) NOUN_{Head} *ʔii.ye/ʔii.re/ʔii.ra* ‘all’
 (b) NOUN_{Head} *ka ʔii.ye/ʔii.re/ʔii.ra* ‘some, other’

Tjwao shows variation between case-neutral *ʔii.ye* and nominative *ʔii.re* or accusative *ʔii.ra* which combine an element *ʔii* with the case-sensitive plural markers discussed in (5.3.3). While *ʔii.ye* mostly appears with singular nouns to convey the meanings ‘entire, whole’ or ‘every’, *ʔii.re/ʔii.ra* is more frequently used with plural nouns and has ‘all’ as its core meaning. However, some unexplained variation exists, and it may be suggested that part of the *ʔii.ye* vs. *ʔii.re/ʔii.ra* distribution is the result of idiolectal variation. A further variant, *ʔii.n*, may appear when the quantifier noun-phrase is itself headed by a postposition. The data contains only one example which is given below:

- (5.56) a. *Ii.tshee tcoa.re kx'oo.xo mũũ-a-hĩ dzira ka ʔii.n tcum ʔxara kx'oo.xo tcum.*
ii.tshee tcoa.re kx'oo.xo mũũ-a-hĩ dzira ka ʔii.n tcum
 DEM.day 1pl.C.NOM animal see-J-PST **bird** **ATTR** **some** **with**
ʔxara kx'oo.xo tcum
 many animal with

Today we have seen animals, some birds, and many other animals.

Although it appears that most quantifiers always precede the head noun, *ʔii.ye/ʔii.re/ʔii.ra* ‘all, every, entire’ always follows its head noun. The head noun preceding *ʔii.ye/ʔii.re/ʔii.ra* receives genitive marking whenever case-sensitive categories are involved. This suggests that syntactically, the quantifier is treated as head while the semantic head assumes the modifier position. In the simplest case, the unmarked noun precedes *ʔii.ye*. The intended meaning is commonly ‘every, entire, whole’, rather than ‘all’ (ex. 5.57 a-d).

- (5.57) a. *Tire ma mũũ-a-ha dzini ʔii.ye ka tcoa.ra dara ma.*
tire ma mũũ-a-ha dzini ʔii.ye ka tcoa.ra dara ma
 1sg REL see-J-PRF **day** **all** OBL 1pl.C.ACC visit REL
 I saw a woman who visits us every day.

b. *Ti ʔxaa-o ʔii.ye kua thũũ.*

ti ʔxaa-o ʔii.ye kua thũũ
 1sg **body** **all** IPFV hurt

My entire body hurts.

c. *Xae ʔii.ye ʔe.ba kua ʔʔui.*

<i>xae</i>	<i>ʔii.ye</i>	<i>ʔe.ba</i>	<i>kua</i>	<i>ʔʔui</i>
night	all	3sg.M.ACC	IPFV	cough

He was coughing the entire night.

d. *ʔE.na ka dao ʔii.ye kua xue kua kũũ-se.*

<i>ʔe.na</i>	<i>ka</i>	<i>dao</i>	<i>ʔii.ye</i>	<i>kua</i>	<i>xue</i>	<i>kua</i>	<i>kũũ-se</i>
3sg.C.NOM	ANT	road	all	IPFV	run	IPFV	go-ADV

They ran the entire way.

In a limited number of examples, *ʔii.ye* also appears with nouns and pronouns marked for plural. Here, the meaning ‘all’ is intended.

(5.58) a. *Xa ʔee simulula tcoa-n ʔii.ye ʔee ua.na-se tsui.na.*

<i>xa</i>	<i>ʔee</i>	<i>simulula</i>	<i>tcoa-n</i>	<i>ʔii.ye</i>	<i>ʔee</i>	<i>ua.na-se</i>	<i>tsui.na</i>
DEM	fire	begin	person-pl.GEN	all	fire	have-ADVZ	be.

‘This is how all the people began to have fire.’

b. *ʔE.kua ʔii.ye kua Tjwao kx’ui.*

<i>ʔe.kua</i>	<i>ʔii.ye</i>	<i>kua</i>	<i>Tjwao</i>	<i>kx’ui</i>
3pl.M	all	IPFV	Tjwao	speak

All (men) are speaking Tjwao.

The meaning ‘all’ may be conveyed in another manner. A noun marked for plural using the genitive or dependent form (see 5.3.3) is usually followed by *ʔii.re* (in the nominative) or *ʔii.ra* (in the accusative) (ex. 5.59a-d).

(5.59) a. *Tcoa.n ʔii.re kua ʔae o kũũ.*

<i>tcoa.n</i>	<i>ʔii.re</i>	<i>kua</i>	<i>ʔae</i>	<i>o</i>	<i>kũũ</i>
1pl.C.GEN	all:NOM	IPFV	village	LOC	go

All of us will go to the village.

b. *ʔE.kua dzãã-n ʔii.re ka ʔaba-ha.*

ʔe.kua dzãã-n ʔii.re ka laba-ha
 3pl.M friend-pl.GEN all:NOM ANT get.hungry:J-PRF
 All their friends were hungry.

c. *Tcxaru-n ʔiira ʔe.na see-ha.*

tcxaru-n ʔii.ra ʔe.na see-ha
firewood-pl.GEN all:ACC 3pl.C take-J-PRF
 They have taken all the fired wood.

d. *Xa phepha-n ʔii.ra ʔe.be dao-xu-na-ha.*

xa phepha-n ʔii.ra ʔe.be dao-xu-na-ha
 DEM **paper-pl.GEN all:ACC** 3sg.M.NOM burn-CAU-J-PRF
 She burnt all the papers.

When the meaning ‘some/other’ is aimed for, the particle *ka* is placed between head and quantifier. In this dissertation, *ka* is tentatively analysed as attributor particle, following Fehn’s (2016) analysis of a probably cognate gram in Ts’ixa. No syntactic difference is made between ‘some’ and ‘other’, corresponding to other Kalahari Khoe languages which convey both notions with one and the same lexical item (e.g., *lúú* in Khwe and Ts’ixa, Kilian-Hatz 2008, Fehn 2016). The predominant form used with the meanings ‘some’ and ‘other’ is *ʔii.ye* (ex. 5.60a-f). Only one example (ex. 5.60g) attests a case-marked form *ʔii.ra*.

(5.60) a. *Kae.tca-tco-re ka ʔii.ye lx’ao ka paa-e-ha.*

kae.tca-tco-re ka ʔii.ye lx’ao ka paa-e-ha
hunt-AG-pl.NOM ATTR some snake by bite-PASS-PRF
 Some hunter was bitten by a snake.

b. *llx’ari ka ʔii.ye tcoa-ra lx’ũũ.*

llx’ari ka ʔii.ye tcoa-ra lx’ũũ
scorpion ATTR some person-pl.ACC kill
 Some scorpions kill people.

c. *Tca kua ʔyũũ ka ʔii.ye kaa?*

tca *kua* *ʔyũũ* *ka* *ʔii.ye* *kaa*
 2sg.M IPFV food ATTR some want
 Do you want some (more) food?

d. *Xa ka ʔii.ye ʔe.ci kx'aa.*

xa *ka* *ʔii.ye* *ʔe.ci* *kx'aa*
 DEM ATTR some 3sg.F.GEN drink
 She may drink some of it.

e. *Glee.tco ka ʔii.ye lx'am-a-ha.*

glee.tco *ka* *ʔii.ye* *lx'am-a-ha*
 woman ATTR other beat-J-PRF
 (She) beat another woman.

f. *Djii ka ʔii.ye.*

djii *ka* *ʔii.ye*
 wood ATTR other
 Another log of wood.

g. *ʔE.be buku ka ʔii.ra ʔanya-ha.*

ʔe.be *buku* *ka* *ʔii.ra* *ʔanya-ha*
 3sg.M.NOM book ATTR some buy:J-PRF
 He bought some books.

The notion of ‘many’ in Tjwao is conveyed by the adjectival quantifier *lxara*. *lxara* is attested throughout the Shua dialect cluster (Vossen 2013) and exists in closely related varieties of Northern Tshwa documented by Westphal (Ganadi and Glabak’e, cf. Westphal fieldnotes). The quantifier precedes its head, which is commonly marked for plural (ex. 5.61a-b). However, unmarked heads appear with mass nouns (ex. 5.61c).

(5.61) a. *ʔXara kx'oo.xo-re kua djii.dum a nyũũ.*

ʔxara *kx'oo.xo-re* *kua* *djii.dum* *a* *nyũũ*
 many animal-pl.NOM IPFV bush LOC stay

Many animals stay in the bush.

b. *Tire* *lxara* *туру.ра* *mũũ* *ndjuu* *o*.

<i>tire</i>	<i>lxara</i>	<i>туру.ра</i>	<i>mũũ</i>	<i>ndjuu</i>	<i>o</i>
1sg	many	mouse-pl.ACC	see	house	LOC

I see many mice in the house.

c. *lxara* *kx'oo.xo* *?nyũũ* *t'ũĩ* *be*.

<i>lxara</i>	<i>kx'oo.xo</i>	<i>?nyũũ</i>	<i>t'ũĩ</i>	<i>be</i> .
many	meat	eat	good	NEG

It is not good to eat a lot of meat.

The quantifier ‘few’ is usually expressed by the adjective *tsũĩ* ‘small’. This is illustrated in the example below.

(5.62) a. *Ti* *kua* *tsũĩ* *tsxoa* *lũã.rera* *mũũ*.

<i>ti</i>	<i>kua</i>	<i>tsũĩ</i>	<i>tsxoa</i>	<i>lũã.rera</i>	<i>mũũ</i>
1sg	IPFV	few	elephant	child-pl	see

I see few young elephants.

b. *Tsũĩ* *kutcum-re*.

<i>tsũĩ</i>	<i>kutcum-re</i>
small	bean-pl.NOM

Few beans.

In addition, Tjwao also has a verb *lx'oa* ‘to be few’ (ex. 5.63) which is only used in predicative contexts.

(5.63) a. *Tcoa-re* *ka* *lx'oa-ra-hĩ*.

<i>tcoa-re</i>	<i>ka</i>	<i>lx'oa-ra-hĩ</i>
person-pl.NOM	ANT	be.few-J-PST

The people were few.

5.4.5 Relative Clauses

The treatment of nominal modifiers as verbs or verb-like elements is a common feature within the Kalahari Basin ‘Sprachbund’ region. These clausal modifiers include state verbs in adjectival function (see ex. 5.37 above for Tjwao), but may also extend to demonstratives, quantifiers, interrogatives, and possessors (Güldemann and Fehn 2017: 513-514). In most languages, including the Kalahari Khoe language Ts’ixa (Fehn 2016), these modifiers must be encoded in a construction which is ‘*like a relative construction*’. Due to the areal significance of relative clauses for understanding the domain of nominal modification, Tjwao relative clauses are here discussed as a further type of nominal modifier.

A relative clause is commonly understood as consisting of a nominal head and a subordinate clause modifying the head noun (Lehman 1986: 664). The head may refer to a core argument (subject, object), or to an oblique argument within the relative clause (e.g., locative). The present data contains two main types of relative clauses which have been attested typologically (cf. Dryer 2013):

- (a) externally headed: the head is outside the relative clause
- (b) internally headed: the head is inside the relative clause

External heads only appear with relative clauses that consist of a single finite verb. Semantically, these relative clauses convey adjectival meanings involving either process verbs which appear with the perfect suffix *-ha* (ex. 5.64a-e), or state verbs with the imperfective particle *kua* and its negative counterpart, the suffix *-ta* (ex. 5.64g). In externally headed imperfective relative clauses, *kua* follows, rather than precedes the verb. Like adjectival modifiers, externally headed relative clauses commonly precede their heads.

- (5.64) a. *Kx’ao.tco-ro lxoo-ha tcxaru kaa.*
kx’ao.tco-ro lxoo-ha tcxaru kaa
 man-pl dry:J-PRF firewood collect.firewood
 The men collect dried wood.

- b. *ʔUi.ka ʔe.be lx’ae-ha djii mĩũ-a-hĩ.*
ʔui.ka ʔe.be lx’ae-ha djii mĩũ-a-hĩ

yesterday 3sg.M.NOM **fall:J-PRF** tree see-J-PST

Yesterday he saw the fallen tree.

c. *ʔE.be lx'oe-ha ʔama lʔanya-ha.*

ʔe.be lx'oe-ha ʔama lʔanya-ha
3sg.M.NOM **be.full:J-PRF** pot buy:J-PRF

He bought a full pot.

d. *Ts'oro-ha xuu tci ʔnyũũ tii.*

ts'oro-ha xuu tci ʔnyũũ tii
rot:J-PRF **thing** 2sg.M.GEN eat IMP.NEG

Do not eat rotten fruit (lit. things)!

e. *Tca kua kaa ã tcum kua xuu-ra?*

tca kua kaa ã tcum kua xuu-ra?
2sg.M IPFV want **DEM** sprout IPFV **thing-pl**

Do you want some fruit (lit. things growing)?

f. *lXuru kua tshaa o tire lx'aa-hĩ.*

lXuru kua tshaa o tire lx'aa-hĩ
cold IPFV **water** LOC 1sg wash-REFL

I washed in cold water.

g. *ʔE.be ʔui.ka lam-ta tco mũũ-a-hĩ.*

ʔe.be ʔui.ka lam-ta tcoa mũũ-a-hĩ
3sg.M.NOM yesterday **hear-IPFV.NEG** person see-J-PST

Yesterday he saw a deaf man.

Relative clauses in which the head has either subject or object role, and which consist of more than a single finite verb, are internally headed (ex. 5.65a-f). While some are followed by a co-referential pronoun (ex. 5.65a, b, c) or a plural marker agreeing with the head noun (ex. 5.65d), thereby displaying a common feature of correlative clauses (Dryer 2013), this is not always the case (ex. 5.65e). The OSV word order is preferred in situations where the head noun corresponds to the object in the relative clause (ex. 5.65f).

(5.65) a. *Xa kx'ao.tco kua ii ndjuu a nyũũ ʔe ti tcaa.xo.*

[[*xa kx'ao.tco*]_{Head} *kua* *ii* *ndjuu* *a* *nyũũ*]_{NP} *ʔe* *ti* *tcaa.xo*
 DEM man IPFV DEM house LOC stay **3sg.C** 1sg brother

The man who lives in this house is my brother.

b. *Xa ʔibi tca ti.a maa-ha ʔe loro-ha.*

[[*xa ʔibi*]_{Head} *tca* *ti.a* *maa-ha*]_{NP} *ʔe* *loro-ha*
 DEM egg 2sg.M 1sg.O give:J-PRF **3sg.C** end:J-PRF

The egg you gave me is finished.

c. *Ii ndjuu tca ʔan-a-ha ʔe t'u.nye.*

[[*ii ndjuu*]_{Head} *tca* ʔan-a-ha]_{NP} *ʔe* *t'u.nye*
 DEM house 2sg.M build-J-PRF **3sg.C** be.good:COP

The house which you have built is nice.

d. *Ii donki-re kua kx'ee-re ou.ou ta mii ka kue o xa ʔe Dube-m donki-re.*

[[*ii donki-re*]_{Head} *kua* *kx'ee*]_{NP-re} *ou.ou* *ta* *mii*
 DEM donkey-pl.NOM IPFV cry-pl.NOM INTJ COMPL say
ka *kue* *o* *xa* *ʔe* *Dube-m* *donki-re*
 OBL river at DEM 3sg.C PN-sg.M donkey-pl.NOM

These donkeys making the sound *ou ou* at the river are Dube's donkeys.

e. *ʌAm mini kua dao kx'are ti tcaa.xu de.*

[[*ʌam mini*]_{Head} *kua* *dao* *kx'are*]_{NP} *ti* *tcaa.xu* *de*
 two goat IPFV road cross 1sg brother POSS

The two goats crossing the road are my brother's.

f. *Gʌae.tco ti kua.nya see kari.se t'u.nye.*

[[*gʌae.tco*]_{Head} *ti* *kua.nya* *see*]_{NP} *kari.se* *t'u.nye*
 woman 1sg FUT marry INTENS beautiful:COP

The woman I will marry is very beautiful.

The data contains a single example of an externally headed relative clause consisting of more than one finite verb. Although more data is needed, it seems that the head may be represented within the relative clause by either a relative pronoun *ma*, or by the pronoun for the third person singular common gender *ʔe*. It is not entirely clear whether the relative clause in example (ex. 5.66) should be considered an apposition, seeing the noun-phrase as such is discontinued.

- (5.66) a. *Kx'ao.tco ti.a tsee ma ŋuu ʔãã-na-ha e.*
 [*kx'ao.tco*]_{Head} *ti.a* *tsee* [*ma* *ŋuu* *ʔana-ha*]_{REL} *e*
 man 1sg.O send **REL.PRON** land know:J-PRF IMP
 'Send a man who knows the area.'

- b. *ʔE.kua nyũũ ʔe ʔae Garia ta kua tcii-e.*
 [*ʔe.kua* *nyũũ* *ʔe*]_{REL} [*ʔae*]_{Head} *Garia* *ta* *kua* *tcii-e*
 3pl.M stay.at **3sg.C** village GN COMPL IPFV call-IMP
 The village where they are going to stay is called Garia.

For relative clauses in which the head corresponds to an oblique argument, no clear-cut strategy could be determined. In example (5.67) below, the relative clause is externally headed and treated as an apposition, followed by the locative marker *a*.

- (5.67) *ʔE.na kua tolo kaa kuu.ʔo-ra ʔe.n kua ||ʔãĩ-xu a.*
ʔe.na *kua* [*tolo*]_{Head} *kaa* [*kuu.ʔo-ra* *ʔe.n* *kua*
 3pl.C IPFV shop look.for clothing-pl.CC 3pl.C IPFV
 ||*ʔãĩ-xu* *a*]_{REL}
 buy-NMZ **LOC**
 They are looking for a shop where they can buy clothes.

Conversely, the relative clause in example (5.68) is internally headed, and the head (which corresponds to the possessor in the relative clause) is resumed by a relative pronoun.

- (5.68) *Xa kx'ao.tco |ũã ka |ʔoo mana kũũ-a-ha.*
 [[*xa* *kx'ao.tco*]_{Head} |ũã *ka* |ʔoo]_{NP} *mana* *kũũ-a-ha*
 DEM man child ANT die REL.PRON go-J-PRF

The man whose child has died has left.

In general, the typological variation in encoding relative clauses in Tjwao seems to exceed what has been described for related languages like Khwe and Ts'ixa which display a clear preference for externally headed relative clauses (cf. Kilian-Hatz 2008, Fehn 2016). The presence of internally headed relative clauses is typologically unusual and has not been previously attested in Southern Africa (Dryer 2013).

5.5 Nominal Derivation

This section discusses three nominal derivations attested in Tjwao. These are nominal compounding, male and female distinctions, and diminutive.

5.5.1 Nominal Compounding

Compounding – or the morphological process of agglutination, by which two or more words are combined or glued together to build novel words – is common in Tjwao. Nominal compounding is also a shared feature in Khwe and Ts'ixa (cf. Kilian-Hatz 2008, Fehn 2016). Nouns in Tjwao can be combined with other nouns, verbs, and adjectives. Example (5.69) below illustrates compound nouns derived from other nouns.

(5.69) Noun + Noun

- | | |
|---|------------------------------|
| a. <i>kx'oo.xo</i> 'animal' + <i>dao</i> 'road' | <i>kx'oo.xo-dao</i> 'trail' |
| b. <i>lʔee</i> 'fire' + <i>dzoa</i> 'ash' | <i>lʔee-dzoa</i> 'fireplace' |

As illustrated above (ex. 5.69a-b), Tjwao exhibits right-headed nominal compounds. In example (5.69a), *dao* 'road' is the head which determines the category of the compound, while *kx'oo.xo* 'animal' acts as modifier. Although most noun+noun compounds are semantically transparent (ex. 5.69a-b), example (5.70) may be seen an example of lexicalisation.

(5.70) *baa* 'father' + *tshaa* 'water' *baa-tshaa* 'beer'

The combination of adjectives or verbs with nouns is rare. In example (5.71a), the noun acts as head, while the adjective acts as modifier. In example (5.71b), the verb which precedes the head noun acts as modifier.

(5.71) a. Adjective + Noun

gloo ‘big’+ *dzira* ‘bird’ ***gloo-dzira*** ‘vulture’

b. Verb + Noun

maa ‘give’ + *tshau* ‘hand’ ***maa-tshau*** ‘left hand’

5.5.2 Derivative Formatives

There are two nominal derivational morphemes found in Tjwao. These are *-tco* and *xu/o*, and they are discussed in detail below:

(a) *-tco*

The morpheme *tco* ‘person’ is a productive suffix that is used to derive nouns from verbs. The resulting compounds are *nomina agentis*, that is, agent nouns (noun + *tco*) (cf. Fehn 2016: 123, Kilian-Hatz 2008: 90). In example (5.72), *-tco* is attached to the verbs *ts’ãã* ‘steal’, *kx’ae.tca* ‘hunt’ and *dara* ‘visit’ to derive *nomina agentis*.

(5.72) **verb + *tco***

- | | |
|----------------------------------|-----------------------------|
| a. <i>ts’ãã-tco</i> ‘thief’ | (<i>lit.</i> steal-person) |
| b. <i>kx’ae.tca-tco</i> ‘hunter’ | (<i>lit.</i> hunt-person) |
| c. <i>dara-tco</i> ‘visitor’ | (<i>lit.</i> visit-person) |

(b) *-xu*

The nominaliser *xu/o* is a productive suffix deriving nouns from verbs and adjectives. The resulting compounds are *nomina instrumenta*, that is, instrumental nouns (noun + *xo*) (cf. Kilian-Hatz 2008: 91). In some cases, as illustrated in examples (5.73b-c), *-xu/o* may be polyfunctional and derive both agent and instrument nouns.

(5.73) **adjective/verbs+ *xu***

- | | |
|---------------------------|---------------------|
| a. <i>kx’oo-xo</i> ‘meat’ | (eat-NMZ) |
| b. <i>tsee.xu</i> ‘truth’ | (become real-NMZ) |
| b. <i>glee-xo</i> ‘woman’ | (female person-NMZ) |
| c. <i>tca-xo</i> ‘uncle’ | (old person-NMZ) |

5.5.3 Male-female Distinction

In Tjwao, there are two adjective-like prefixes that are attested, that is, *g|lee* ‘female’ and *kx’ao* ‘male’ which cannot be nominalised by simply taking PGN enclitics. They are used as prefix-like elements modifying nouns in a nominal compound and commonly indicate the natural gender of people and animals as illustrated in example (5.74).

- (5.74) a. *g|lee* ‘female’ + *gee* ‘cattle’ ***g|lee-gee*** ‘cow’
 b. *kx’ao* ‘male’ + *huku* ‘chicken’ ***kx’ao-huku*** ‘cock’

5.5.4 Diminutive

Tjwao diminutives are derived through compounding, involving the noun *lũã* ‘child’.⁷⁷ When *lũã* ‘child’ is suffixed to a nominal root, it conveys the meaning of smallness of size, for example, *kx’aro-lũã* ‘small boy’. The diminutive suffix appears with both animate and inanimate objects (ex. 5.75a-g).⁷⁸

- (5.75) a. *kx’aro-lũã* ‘small boy’
 b. *g|lee-lũã* ‘small girl’
 c. *ndjuu-lũã* ‘small house’
 d. *dao-lũã* ‘small road/path’
 e. *g|ana-lũã* ‘small leaf’
 f. *tcuba-lũã* ‘garden’
 g. *ʔama-lũã* ‘small pot’

Some nouns involving the diminutive suffix *-lũã* have become lexicalised. Two frequently employed cases of lexicalisation are illustrated below:

- (5.76) a. *dzira-lũã* ‘bird’
 vulture-DIM
 b. *djii-lũã* ‘walking stick’
 tree-DIM

⁷⁷ Most languages of the Kalahari Khoe branch have a diminutive deriving from *lũã* ‘child’.

⁷⁸ Sourthen Bantu copied the same system of dimunitivisation because it is not used in other Bantu languages which retain class 12 and 12.

b. *ℓx'aa-hĩ ndzoro.a dara.tco-ra kua.nya haa.*

		(S)		(V)
<i>ℓx'aa-hĩ</i>	<i>ndzoro.a</i>	<i>dara.tco-ra</i>	<i>kua.nya</i>	<i>haa</i>
wash-REFL	after	visitor-pl	FUT	come

After bathing the visitors will come.

c. *Ii kx'aro kua xue.*

	(S)		(V)
<i>ii</i>	<i>kx'aro</i>	<i>kua</i>	<i>xue</i>
DEM	boy	IPFV	run

'This boy is running.'

6.1.2 Transitive Verbs

Transitive verbs take two arguments, namely, the subject and the object. These verbs are also known as monotransitives as they can only take one object each (cf. Comrie 1985, Crystal 2003). As illustrated in the examples below, the verbs *mũũ* 'see', *kx'ui* 'speak', and *ℓx'am* 'beat' are all transitive. Each of them takes one subject noun-phrase (*ti* '1sg', *dana.tco* 'girl', *kx'ao.tco-re* 'men'), and one object noun-phrase (*tca* '2sg.M', *Tjwao* 'Tjwao language', *ℓx'ao* 'snake').

(6.2) a. *Ti kua tca mũũ.*

(S)		(O)	(V)
<i>ti</i>	<i>kua</i>	<i>tca</i>	<i>mũũ</i>
1sg	IPFV	2sg.M	see

You see me.

b. *Dana.tco kua Tjwao kx'ui.*

(S)		(O)	(V)
<i>dana.tco</i>	<i>kua</i>	<i>Tjwao</i>	<i>kx'ui</i>
girl	IPFV	Tjwao	speak

The girl is speaking Tjwao.

c. *Kx'ao.tco-re kua ℓx'ao ℓx'am.*

(S)		(O)	(V)
<i>kx'ao.tco-re</i>	<i>kua</i>	<i>lx'ao</i>	llx'am
man-pl	IPFV	snake	beat

‘The men are beating the snake.’

Like in other Khoe languages (Vossen 1997, 2013, ed.), the default constituent order in the transitive verb phrase in Tjwao is verb-final, with subject-object-verb (SOV) being the preferred pattern. However, certain information-structural properties of the utterance (which will require further research) allow for fronting of the object, resulting in OSV. Contrary to the word order in example (6.2), in the examples below the object is shifted and it precedes the noun and the transitive verb.

(6.3) a. *lx'ao ti kua mĩũ-a ʔãã.*

(O)	(S)		(V)
<i>lx'ao</i>	<i>ti</i>	<i>kua</i>	<i>mĩũ.a.ʔãã</i>
snake	1sg	IPFV	recognize

‘I recognise the snake.’

b. *Djii ti kua ʔabo.*

(O)	(S)		(V)
<i>djii</i>	<i>ti</i>	<i>kua</i>	<i>ʔabo</i>
tree	1sg	IPFV	climb

‘I climb the tree.’

The evidence shows that SOV word order is more common than OSV. Tjwao also has SVO word order; however, unlike in Khwe (Kilian-Hatz 2008) and Ts'ixa (Fehn 2016) there are few examples in the dataset.

(6.4) a. *Tire kaa-ta xa lii.*

(S)	(V)		(O)
<i>tire</i>	<i>kaa-ta</i>	<i>xa</i>	<i>lii</i>
1sg	like-IPFV.NEG	DEM	song

I do not like this song.

b. *Nare hĩ xuu?*

(S)	(V)	(O)
<i>nare</i>	<i>hĩ</i>	<i>xuu</i>
who	do	thing

Who did what?

6.1.3 Ditransitive Verbs

There are few ditransitive verbs in Tjwao. Ditransitive verbal roots take two objects, often referred to as ‘direct’ and ‘indirect’ object, or as ‘theme’ and ‘recipient’. A canonical example of a ditransitive verb is *maa* ‘give’. In example (6.5a), the direct object (or theme) is *dini* ‘honey’, and the indirect object (or recipient) is *ũã-rera* ‘children’. The word order pattern in a ditransitive verb phrase is strictly verb-final, thereby based on the word order pattern of transitive verb phrases extended by the indirect object. The indirect object occurs before the direct object (ex. 6.5a-b). However, in case of fronting of the object as illustrated in example (6.5c), the indirect object occurs after the direct object.

(6.5) a. *Baa.re ʔe.m |ũã-rera dini maa-ha.*

(Subject)		(Indirect Object)	(Object)	(Verb)
<i>baa.re</i>	<i>ʔe.m</i>	<i> ũã-rera</i>	<i>dini</i>	<i>maa-ha</i>
father	3sg.M	child-pl	honey	give:J-PRF

Father gave his children honey.

b. *Xa tca.tco-re xa |ũã |ʔun maa-ha.*

	(S)		(IO)	(O)	(V)
<i>xa</i>	<i>tca.tco-re</i>	<i>xa</i>	<i> ũã</i>	<i> ʔun</i>	<i>maa-ha</i>
DEM	elder-pl	DEM	child	name	give:J-PRF

The parents have given the child a name.

c. *Xa ʔibi tca ti.a maa-ha e |oro-ha.*

	(O)	(S)	(IO)	(V)		
<i>xa</i>	<i>ʔibi</i>	<i>tca</i>	<i>ti.a</i>	<i>maa-ha</i>	<i>e</i>	<i> oro-ha</i>
DEM	egg	2sg.M	1sg	give:J-PRF	REL	end:J-PRF

The egg you gave me is finished.

6.1.4 Ambitransitive Verbs

The verb that has both transitive and intransitive meanings is called an ambitransitive verb. There is only one ambitransitive verb attested in Tjwao, namely, the motion verb *tcãã* ‘enter’. In example (6.6a), *tcãã* ‘enter’ is used *intransitively*, with no object, while in example (6.6b-c), it is used *transitively*, with the object.

(6.6) a. *Doana dana-tco-re e.dze tcãã-na-ha.*

	(S)		(V)
<i>noana</i>	<i>dana-tco-re</i>	<i>e.dze</i>	<i>tcãã-na-ha</i>
three	girl-person-pl	3pl.F	enter:J-PRF
The three girls came in.			

b. *Mare kua ?ama a kx'oxo tcãã.*

	(S)			(O)	(V)
<i>mare</i>	<i>kua</i>	<i>?ama</i>	<i>a</i>	<i>kx'oxo</i>	<i>tcãã</i>
Woman	IPFV	pot	LOC	meat	enter
The woman put the meat into the pot.					

c. *Ti kua mangoye see-a koloi ?a tcãã.*

	(S)	(O)				(V)
<i>ti</i>	<i>kua</i>	<i>mangoye</i>	<i>see-a</i>	<i>koloi</i>	<i>?a</i>	<i>tcãã</i>
1sg	IPFV	cat	take-?	car	OBL	enter
I put the cat in the car.						

6.2 The Juncture Morpheme

Tjwao has a grammatical formative called the ‘juncture’ morpheme which is attested throughout the Kalahari sub-branch of the Khoe-Kwadi family. The term ‘juncture’ was coined by Köhler (1981: 495)⁷⁹ in his study of Khwe, one of the Kalahari Khoe languages. According to Köhler (1981), the function of the juncture is to join the verb root to a grammatical suffix. It is suggested that the base form of the morpheme is /a/ as it occurs in all Kalahari Khoe languages (Vossen 1997, 2010). /a/ has various allomorphs which vary from language to language. Whenever the juncture occurs, it is accompanied by a tonal operation, known in the

⁷⁹ Köhler (1981) uses the French term ‘joncture’.

literature as ‘flip-flop’, which causes a change in the tonal melody of verbs preceding the juncture morpheme (cf. Haacke 1999). Flip-flop has been described for both Khoekhoe (Haacke 1999) and the languages of the Kalahari Khoe subgroup (Nakagawa 2006 for G!ui, Kilian-Hatz 2008 for Khwe, Fehn 2016 for Ts’ixa). While it is expected that flip-flop also exists in Tjwao, a comprehensive description of Tjwao lexical and morphological tonology is still lacking and will not be provided within the frame of this dissertation.

The juncture morpheme is found in three contexts: it links the verb root to a defined set of TAM suffixes; it links the verb root to a subset of derivational suffixes; and lastly, it links two or more verbs in a multiverb construction referred to in scholarly literature as a compound verb (cf. Nakagawa 2006), serial verb construction (Kilian-Hatz 2008: 297) or juncture verb construction (cf. Fehn 2016: 175).⁸⁰ Tjwao-specific examples for all contexts in which the juncture is used are provided below.

(6.7) a. **Linking two or more verbs in a multiverb construction:**

Ndjua ?a ti kua bokisi |hĩ-a-tcãã.

<i>ndjuu</i>	<i>?a</i>	<i>ti</i>	<i>kua</i>	<i>bokisi</i>	<i> hĩ-a</i>	<i>tcãã</i>
house	OBL	1sg	IPFV	box	push-J	enter

I push the box into the house.

b. **Linking a TAM suffix to the verb root:**

?E.m dum tire |lam-a-ha.

<i>?e.m</i>	<i>dum</i>	<i>tire</i>	<i> lam-a-ha</i>
3sg.M	voice	1sg	hear-J-PRF

I have heard his voice.

c. **Linking the derivational suffixes -xu (completive) and -ma (benefactive) to the verb root:**

Tire mari ti de gam-a-xu-na-ha

<i>tire</i>	<i>mari</i>	<i>ti</i>	<i>de</i>	<i>gam-a-xu-na-ha</i>
-------------	-------------	-----------	-----------	-----------------------

⁸⁰ Whether multiverb constructions involving the juncture morpheme should be analysed as serial-verb constructions in the narrower sense constitutes a matter of ongoing scholarly debate (cf. Fehn 2016). Multiverb constructions in Tjwao are discussed in this chapter (cf. 6.2.2).

1sg money 1sg POSS throw-**J-COMPL-J-PRF**

I threw my money away.

Ti kua tca shinga-na-ma.

ti kua tca shinga-na-ma

1sg IPFV 2sg.M work-**J-BEN**

I work for you.

The juncture morpheme never appears with the passive derivational suffix *-e*⁸¹ (ex. 6.8), the reflexive *-hĩ* (ex. 6.9), the causative *-kaxu* (ex. 6.10), and the reciprocal *-tcum* (ex. 6.11). The juncture morpheme only appears with the completive suffix *-xu* and the benefactive suffix *-ma* (see ex. 6.7c above). The examples below illustrate the four suffixes that do not require a juncture morpheme.

(6.8) **-e ‘PASS’**

a. |Ũã-|ũã ʔe ʔaba-e-ha.

|ũã-|ũã ʔe ʔaba-e-ha

baby 3sg.C give.birth-PASS-PRF

The baby was born.

b. Ti tcaxo dini ka paa-e-ha.

ti tcaxo dini ka paa-e-ha

1sg brother bee OBL bite-**PASS-PRF**

‘My brother was stung by a bee.’

(6.9) **--hĩ ‘REFL’**

a. *Ti kua xo.djoe lx’aa-hĩ.*

ti kua xo.djoe lx’aa-hĩ

1sg IPFV still wash-**REFL**

I was still bathing.

⁸¹ Due to its incompatibility with the passive suffix and occurrence with all TAM suffixes, Kilian-Hatz (2008: 108) considers the West Caprivi Khwe juncture to be an active marker.

b. $\text{\textbackslash}X'aa-h\tilde{i}$ *ndzoro.a* *dara.tco-ra* *kua.nya* *haa*.

$\text{\textbackslash}x'aa-h\tilde{i}$ *ndzoro.a* *dara.tco-ra* *kua.nya* *haa*
wash-REFL after visitor-pl FUT come

After bathing the visitors will come.

(6.10) **-kaxu ‘CAU’**

a. *Tca kua ti.a thũũ-kaxu.*

tca *kua* *ti.a* *thũũ-kaxu*
2sg.M IPFV 1sg.O injure-CAU

You are making my head hurt.

b. *ʔE.be kua ti.a tcira-kaxu.*

ʔe.be *kua* *ti.a* *tcira-kaxu*
3sg.M IPFV 1sg.O vomit-CAU

He makes me want to vomit.

(6.11) **-tcum ‘REC’**

a. *ʔE.tsara kua $\text{\textbackslash}x'am-tcu$.*

ʔe.tsara *kua* *$\text{\textbackslash}x'am-tcu$*
3du.M IPFV beat-REC

There are beating each other.

b. *$\text{\textbackslash}Am$ $\text{\textbackslash}ũã-rera$ *kua* *dzo.tciri-tcum*.*

$\text{\textbackslash}am$ *$\text{\textbackslash}ũã-rera$* *kua* *dzo.tciri-tcum*
two child-PL IPFV play-REC

Two children are playing together.

6.2.1 Allomorphs of the Juncture Morpheme

There are various allomorphs of the juncture morpheme that occur in finite verb constructions. According to Vossen (2010: 48), the “allomorphs are largely, but not exclusively, phonological conditioned, progressive assimilation to the stem-final vowel of the verbal base being the dominant feature of this morphological change.” The final vowel of the finite verb determines which juncture allomorph the verb takes.

There are seven juncture allomorphs attested in Tjwao: zero, /a/, /-r-/, /-n-/, /ra/, /na/ and /-nya/.⁸² The allomorphs do not occur randomly in certain environments but are governed by the phonological properties of the preceding verb. The most commonly occurring juncture allomorphs are zero and /a/. Zero occurs after CVV verbs ending in /a, ǎ, e, o/. /a/ occurs regularly after CVN verbs, as well as after CVV and some CVCV verbs ending in the front vowels -i or -u. Zero and -r- insertion occur in similar phonotactic environments, and it may be suggested that apart from the syllable structure, tone may also influence the choice of the juncture allomorph (see also Elderkin 1986b). Other juncture allomorphs are rare: -n- is attested with only a single verb (ʔǎǎ ‘to know’), -ra only occurs with CVV verbs with /oa/, and -nya is restricted to verbs with /ǎĩ/.

Bisyllabic CVCV verbs (ex. 6.12a), as well as derived verbs (ex. 6.12b) commonly occur with the juncture allomorph -na. In addition, -na also occurs with a small subset of CVV verbs ending in a nasalised back vowel -ǎ (ex. 6.12c).

(6.12) a. *Tshaa ʔe.ce djira-na-hĩ.*

<i>tshaa</i>	<i>ʔe.ce</i>	<i>djira-na-hĩ</i>
water	3sg.F	ask.for- J -PST

She asked for water.

b. *Ndlovu-be karo gam-a-xu-na-ha.*

<i>Ndlovu-be</i>	<i>karo</i>	<i>gam-a-xu-na-ha</i>
Ndlovu-sg.M	stone	throw- J -COMPL- J -PRF

Ndlovu threw a stone.

c. *ʔUi.ka ʔaba |ʔũǎ-re ʔe.kua yee a tcǎǎ-na-hĩ.*

<i>ʔui.ka</i>	<i>ʔaba</i>	<i> ʔũǎ-re</i>	<i>ʔe.kua</i>	<i>yee</i>	<i>a</i>	<i>tcǎǎ-na-hĩ</i>
yesterday	dog	bone-pl	3pl.M	hole	LOC	enter- J -PST

Yesterday they buried the dog's bones in a hole.

⁸² In cases where there is no overt juncture (‘zero’), it is expected that associated tonal changes, i.e., ‘flip-flop’, are still present (see section 6.2 above).

As borrowed verbs frequently have the syllable pattern CVCV, they also tend to occur with *-na*. In examples (6.13a-b), the bisyllabic verbs *cinga* ‘work’ and *thusa* ‘help’ (borrowed from Kalanga) are attached to the TAM suffixes via the allomorph *-na*.

- (6.13) a. *ʔUi.ka tire dzini ʔii.ye cinga-na-hĩ*
ʔui.ka tire dzini ʔii.ye cinga-na-hĩ
 yesterday 1sg day all work-**J-PST**
 Yesterday I worked all day.

- b. *Ti.a thusa-na-ha.*
ti.a thusa-na-ha
 1sg.ACC help-**J-PRF**
 (He) helped me.

The *-nya* allomorph appears to be a rare phenomenon in Tjwao and Kalahari Khoe in general. It is also attested in Shua (Anne-Maria Fehn p.c. 2019), as well as in Kua and Tsua (cf. Vossen 2013: 490). In Tjwao, it occurs exclusively with CVV verbs displaying an /ãĩ/ rhyme. When *-nya* is attached, the second vowel of the verb, that is, the high nasal vowel of the *ĩ* is deleted and *ã* is denasalised, as exemplified in (6.14) below:

- (6.14) a. *ʔE.be doa nllanya-ha.*
ʔe.be doa nllanya-ha
 3sg.M kudu **shoot:J-PRF**
 He shot a kudu.
- b. *ʔE.be buku ka ʔii.ra llʔanya-ha.*
ʔe.be buku ka ʔii.ra llʔanya-ha
 3sg.M book ANT some **buy:J-PRF**
 He bought some books.

Table 8 below provides a comprehensive overview of juncture morphemes, along with the phonotactic environment in which they occur.

Table 8: Juncture Allomorphs with the Perfect Suffix -ha

Allomorph	Preceding Context	Examples		
(I) “zero”	CVa			
	/aa/	<i>paa-ha</i>	‘bite’	(< <i>paa</i>)
	/oa/	<i>ts’oa-ha</i>	‘exit’	(< <i>ts’oa</i>)
	CVã			
	/ãã/	<i>ts’ãã-ha</i>	‘steal’	(< <i>ts’ãã</i>)
	/ũã/	<i>lũã-ha</i>	‘go down’	(< <i>lũã</i>)
	CVe			
	/ae/	<i>lx’ae-ha</i>	‘fall’	(< <i>lx’ae</i>)
	/ee/	<i>see-ha</i>	‘take’	(< <i>see</i>)
	/oe/	<i>lx’oe-ha</i>	‘be full’	(< <i>lx’oe</i>)
	CVo			
	/ao/	<i>lʔao-ha</i>	‘insult’	(< <i>lʔao</i>)
	/oo/	<i>lʔoo-ha</i>	‘die’	(< <i>lʔoo</i>)
(II) /-a/	CVi			
	/ai/	<i>ʔai-a-ha</i>	‘carry’	(< <i>ʔai</i>)
	/ii/	<i>sii-a-ha</i>	‘arrive’	(< <i>sii</i>)
	/ui/	<i>kx’ui-a-ha</i>	‘speak’	(< <i>kx’ui</i>)
	CVCi	<i>ts’iri-a-ha</i>	‘extinguish’	(< <i>ts’iri</i>)
	CVĩ			
	/ãĩ/	<i>kx’ãĩ-a-ha</i>	‘laugh’	(< <i>kx’ãĩ</i>)
	/ĩĩ/	<i>lhĩĩ-a-ha</i>	‘push’	(< <i>lhĩĩ</i>)
	CVu			
	/au/	<i>ʔau-a-ha</i>	‘shout’	(< <i>ʔau</i>)
	/uu/	<i>xuu-a-ha</i>	‘leave’	(< <i>xuu</i>)
	CVCu	<i>lʔuru-a-ha</i>	‘forget’	(< <i>lʔuru</i>)
	CVũ			
	/ũũ/	<i>lx’ũũ-a-ha</i>	‘kill’	(< <i>lx’ũũ</i>)
	CVN			
/m/	<i>lx’am-a-ha</i>	‘beat’	(< <i>lx’am</i>)	
/n/	<i>lʔan-a-ha</i>	‘ripen’	(< <i>lʔan</i>)	

(III) /-r-/	CVa			
	/aa/	<i>kara-ha</i>	‘search’	(< <i>kaa</i>)
	CVe			
	/ae/	<i>lx’are-ha</i>	‘meet’	(< <i>lx’ae</i>)
	/ee/	<i>there-ha</i>	‘give’	(< <i>thee</i>)
	/oe/	<i>lhore-ha</i>	‘miss’	(< <i>lhoe</i>)
	CVo			
	/ao/	<i>lx’aro-ha</i>	‘chop’	(< <i>lx’ao</i>)
	/oo/	<i>tcoro-ha</i>	‘refuse’	(< <i>tcoo</i>)
(IV) /-n-/	/ãã/	<i>ʔana-ha</i>	‘know’	(< <i>ʔãã</i>)
(V) /-ra/	/oa/	<i>lx’oa-ra-ha</i>	‘be few’	(< <i>lx’oa</i>)
(VI) /-na/	CVã			
	/ãã/	<i>tcãã-na-ha</i>	‘enter’	(< <i>tcãã</i>)
	/ũã/	<i>tcũã-na-ha</i>	‘break’	(< <i>tcũã</i>)
	CVCV			
	CVCa	<i>djira-na-ha</i>	‘ask for’	(< <i>djira</i>)
	CVCe	<i>kx’are-na-ha</i>	‘cross’	(< <i>kx’are</i>)
	CVCi	<i>ʔumi-na-ha</i>	‘injure’	(< <i>ʔumi</i>)
	CVCo	<i>dzaro-na-ha</i>	‘pick up’	(< <i>dzaro</i>)
CVCu	<i>tcxanu-na-ha</i>	‘look at’	(< <i>tcxanu</i>)	
	derived verbs	<i>gam-a-xu-na-ha</i>	‘throw away’	(< <i>gam-a-xu</i>)
(VII) /-nya/	/ãĩ/	<i>ʔanya-ha</i>	‘buy’	(< <i>ʔãĩ</i>)

6.2.2 Multiverb Constructions (MVCs)

To date, there is an ongoing debate on Khoe multiverb constructions featuring the juncture morpheme (cf. section 2.3.2). Synchronically, Kilian-Hatz (2008) argues that the MVCs featuring a juncture morpheme can be interpreted as serial verb construction (SVCs) using Aikhenvald’s (2006) diagnostic criteria to identify SVCs.⁸³ Available evidence indicates that this morpheme is applied whenever a verb is followed by another verb, either a complete verb or a suffix of verbal origin. Fehn (2016) and Güldemann and Fehn (2017) argue that rather than

⁸³ This study adopts Aikhenvald’s (2006) terminology developed for serial verbs without making any claims as to whether the complex predicates in Tjwao are SVCs or another type of multiverb construction.

being semantically opaque, the juncture is a grammatical element putting verbs into a construct state. In this thesis, MVCs featuring the juncture morpheme will be interpreted as SVC, with the assumption that synchronically, the juncture in Tjwao neither functions as a coordinating, nor as a subordinating morpheme.⁸⁴ The following sections discuss the structural and semantic types of MVCs found in Tjwao.

6.2.2.1 Structural Types of Multiverb Constructions

Tjwao distinguishes two types of MVCs. These are conjoined predicates with the conjunction *-a*, and those constructions in which multiple verbs are linked by the juncture morpheme. As in Ts'ixa (Fehn 2016) and Naro (Visser 2010), Tjwao has a conjunction *-ʔa* or *-a* which directly follows all verbs but the last in a series of verbal predicates that share the clausal subject as well as TAM value. In examples (6.15 a-c) below, Tjwao constructions with the conjunction *-a* are given.

(6.15) a. *li kx'ari kua tshao-a see-a tcoo-se hĩ.*

<i>li</i>	<i>kx'ari</i>	<i>kua</i>	<i>tshao-a</i>	<i>see-a</i>	<i>tcoo-se</i>	<i>hĩ</i>
DEM.prox	root	IPFV	dig-CONJ	take-CONJ	medicine-ADV	use

This root is dug and used as medicine.

b. *lxobe tshaa a pee-a tcãã.*

<i>lxobe</i>	<i>tshaa</i>	<i>a</i>	<i>pee-a</i>	<i>tcãã</i>
frog	water	LOC	jump-CONJ	enter

The frog jumped into the water.

c. *Botile ʔe lx'ae-a ʔoo-ha.*

<i>botile</i>	<i>ʔe</i>	<i>lx'ae-a</i>	<i>ʔoo-ha.</i>
bottle	3sg.C	fall-CONJ	die:J-PRF

The bottle fell and broke.

On the surface, it is not always possible to distinguish the conjunction from the juncture, especially since /a/ can be used not only as a coordinator but also one of the main juncture

⁸⁴ Güldemann and Fehn (in preparation) argue that MVCs featuring a juncture morpheme in Kalahari Khoe languages have a historical origin different from the prototypical SVCs found in Kx'a and Tuu.

allomorphs found in the data. Formally, the two can only be distinguished when – like in the examples above – the expected juncture allomorph is not identical with /a/. The example below clearly shows an SVC with zero juncture after *xoe* ‘to run’:

- (6.16) *Ndjuu a ti kua xue tcãã.*
ndjuu a ti kua xue tcãã
 house LOC 1sg IPFV **run:J** enter
 I run into the house.

Conversely, example (6.17) is ambiguous. The element *-a* attached to *tan* ‘get up’ formally matches both the juncture allomorph and the conjunction:

- (6.17) *Xai ʔe tan-a kũũ.*
xai ʔe tan-a kũũ
 wind 3sg.C get.up-**J/CONJ** go
 The wind began to blow.

In Ts’ixa and Naro, the conjunction can be distinguished from the juncture by the absence of a change in the tonal melody of the preceding verb commonly referred to as ‘tonal flip-flop’ (cf. 6.2). The tonal changes can be reconstructed to Proto-Khoe but differ in individual languages according to their tonal correspondence with the proto language. In a nutshell, all Proto-Khoe *H tones change to *L, and all *L tones change to *H (Elderkin 2008). However, a comprehensive analysis of flip-flop in Tjwao will only be possible once the tonal system and correspondences with Proto-Khoe have been established. Therefore, a comparison between SVCs and the conjunction *-a* are outside the scope of the present work.

6.2.2.2 *Semantic Types of Multiverb Constructions*

As in the other Kalahari Khoe languages, multiverb constructions can be used in Tjwao in a variety semantic meanings, that is, manner, cause effect and path. Due to the apparent functional overlap between SVCs and conjoined predicates, both are considered and distinguished whenever possible. Ambiguous examples are marked as such.

(a) Manner

Manner is an SVC subtype in which one verb may explain the way the action of the other verb was done. There are no unambiguous examples available to indicate whether conjoined predicates or SVCs are preferred in these contexts. In example (6.18 b), the two verbs may have different valency frames. While *kũũ* ‘walk’ is intransitive, *kama* ‘track’ is transitive and takes *dao* ‘path’ as its object. In this case, *dao* precedes *kama*, thereby going in-between the two verbs forming the predicate.

(6.18) a. *Ti kua nlgai-a kũũ.*

<i>ti</i>	<i>kua</i>	<i>nlgai-a</i>	<i>kũũ.</i>
1sg	IPFV	sing- J/CONJ	walk

I walk singing.

b. *Ti kua kũũ-a dao kama.*

<i>ti</i>	<i>kua</i>	<i>kũũ-a</i>	<i>dao</i>	<i>kama</i>
1sg	IPFV	walk- J/CONJ	path	track

I walk tracking.

(b) Cause Effect

This type of predicate is characterised by iconic constituent order (cf. Aikhenvald 2006: 29), that is, the second verb expresses the outcome of an action described in first verb. The examples available in the dataset clearly feature the conjunction, as the juncture allomorph expected for *xue* ‘to run’ is zero. In the illustrations given below, the object belongs to V₂ and occurs in between the two predicates.

(6.19) a. *Mbuta kua xue-a doa ngee-xu.*

<i>mbuta</i>	<i>kua</i>	<i>xue-a</i>	<i>doa</i>	<i>ngee-xu</i>
hare	IPFV	run-CONJ	kudu	exceed:J-COMPL

The hare outruns the kudu.

b. *Mbuta kua xue-a mpala xuu-a-xu.*

<i>mbuta</i>	<i>kua</i>	<i>xue-a</i>	<i>mpala</i>	<i>xuu-a-xu.</i>
Hare	IPFV	run-CONJ	impala	leave-J-COMPL

The hare outruns the impala.

(c) **Path**

Path SVCs require the first verb and second verb in a construction to share all arguments, that is, to share transitivity value. Hence, if an object occurs, it belongs to the valency frame of both verbs (ex.6.20 a). While example (6.20 b) is ambiguous, example (6.20 c) suggest an SVC interpretation is more likely.

(6.20) a. *Ndjuu ?a ti kua bokisi |hii-a tcãã.*
ndjuu ?a ti kua bokisi |hii-a tcãã
 house OBL 1sg IPFV box **push-J/CONJ** **enter**
 I push the box into the house.

b. *Kx'aro kua djii a ||ũã haa.*
kx'aro kua djii a ||ũã haa
 boy IPFV tree LOC **descend:J** **come**
 The boy comes down from the tree.

c. *Ndjuu a ti kua xue ts'oa.*
ndjuu a ti kua xue ts'oa
 house LOC 1sg IPFV **run:J** **exit**
 I run out of the house.

6.3 TAM in Tjwao

Tjwao grammatically marks its predicates for tense, aspect and, to a lesser degree, mood (TAM). Like related languages, Tjwao expresses these categories by means of both verbal affixes and particles (i.e., free morphemes). Tjwao mirrors Glui (Nakagawa 2013) in having two clausal slots for TAM markers: one preverbal slot, and one postverbal slot. The preverbal slot (Slot 1) may be subdivided into an Aspect Slot and a Tense Slot; the postverbal slot (Slot 2) may hold suffixes with both aspectual and temporal meanings, albeit not simultaneously.

SUBJECT	SLOT 1	(OBJECT)	VERB	SLOT 2
	ASPECT TENSE			ASPECT/TENSE

<i>kua</i> ‘IPFV’	<i>nya</i> ‘FUT’	<i>-J-ha</i> ‘PRF’
	<i>ka</i> ‘ANT’	<i>-J-hĩ</i> ‘PST’

While the available data does not allow for a comprehensive description, it appears that tense and aspect markers can co-occur freely in Tjwao.

(6.21) a. *Tire kua tsxoa djii.du mũũ-a-ha.*

<i>tire</i>	<i>kua</i>	<i>tsxoa</i>	<i>djii.du</i>	<i>mũũ-a-ha</i>
1sg	IPFV	elephant	bush	see-J-PRF

I have been seeing an elephant in the bush.

b. *!Ũã-rere ka labá-ha.*

<i>!ũã-rere</i>	<i>ka</i>	<i>labá-ha</i>
child-pl	ANT	get.hungry:J-PRF

The children were hungry.

c. *?Uu tire kua ka labá-ha.*

<i>?uu</i>	<i>tire</i>	<i>kua</i>	<i>ka</i>	<i>labá-ha</i>
morning	1sg	IPFV	ANT	get.hungry:J-PRF

In the morning I was hungry.

d. *!Ũã-rere ?uu.a nya labá-ha.*

<i>!ũã-rere</i>	<i>?uu.a</i>	<i>nya</i>	<i>labá-ha</i>
child-pl	tomorrow	FUT	get.hungry:J-PRF

The children will be hungry tomorrow.

e. *Ii.tshee tire uu glee.tco kari.se kua tcoa.ra dara-hĩ.*

<i>ii.tshee</i>	<i>tire</i>	<i>uu</i>	<i>glee.tco</i>	<i>kari.se</i>	<i>kua</i>	<i>tcoa.ra</i>	<i>dara-hĩ</i>
DEM.day	1sg	DEM	woman	INTENS	IPFV	1pl.C	visit:J-PST

Today I saw the woman who was visiting us a lot.

Tjwao has two primary aspect morphemes: the imperfective or continuous particle *kua* (Slot 1) and the perfect suffix *-ha* (Slot 2). *-ha* also has properties of a past tense marker and may therefore be considered a portmanteau morpheme. In addition, Tjwao has three primary tense

markers: the future particle *nya* (Slot 1), the anterior particle *ka* (Slot 1), and the past tense suffix *-hĩ* (Slot 2). The individual morphosyntactic and semantic properties of these TAM markers will be discussed in the following sections.

6.3.1 Imperfective *kua*

Imperfective or continuous aspect is expressed by the particle *kua* (pronounced [kwa]). *Kua* is placed in Slot 1, that is, before the verb, and precedes the tense particles *nya* and *ka* it regularly combines with. The position of *kua* when appearing by itself is illustrated in examples (6.22 a-b) below.

- (6.22) a. *Glae.tco kua ndjaa kaa.*
glae.tco kua ndjaa kaa
 woman IPFV dance want
 The woman wants to dance.

- b. *Ii kx'ao.tco kua kae-tca.*
ii kx'ao.tco kua kae-tca
 DEM man IPFV hunt
 This man is hunting.

There are few verbs in Tjwao that can indicate a state in combination with *kua*; these verbs seem to be experiential states linked to a temporary body condition.

- (6.23) a. *Ti maa kua thũũ.*
ti maa kua thũũ
 1sg head IPFV hurt
 My head hurts.
- b. *?E.be kua tcii.*
?e.be kua tcii
 3sg.M IPFV sick
 He is sick.

c. *Ti kua lxuru.*

<i>ti</i>	<i>kua</i>	<i>lxuru</i>
1sg	IPFV	shiver

I am shivering.

The imperfective marker *kua* cannot be directly negated. Instead, Tjwao has a suffix *-ta* marking negative imperfective.

(6.24) a. *Tire khuri xo.djoe mũũ-ta.*

<i>tire</i>	<i>khuri</i>	<i>xo.djoe</i>	<i>mũũ-ta</i>
1sg	pig	still	see-NEG.IPFV

I have never seen a pig.

b. *ǀʔee kua ɲaa kika kx'oo.xo-re ǀuu-ta.*

<i>ǀʔee</i>	<i>kua</i>	<i>ɲaa</i>	<i>kika</i>	<i>kx'oo.xo-re</i>	<i>ǀuu-ta</i>
fire	IPFV	burn	when	animal-pl	get.near-NEG.IPFV

When the fire burns, the animals do not get near.

6.3.2 Future *-nya*

The future tense particle *nya* is placed in Slot 1, that is, before the verb. Rarely, *nya* appears without the imperfective particle *kua* (ex. 6.25).

(6.25) a. *ǀUu.a ǀe.kua nya ndjuu ǀani.*

<i>ǀUu.a</i>	<i>ǀe.kua</i>	<i>nya</i>	<i>ndjuu</i>	<i>ǀani</i>
tomorrow	3pl.M	FUT	house	build

The men will build the house tomorrow.

b. *ǀE.kua ǀui nya kae.tca.*

<i>ǀe.kua</i>	<i>ǀui</i>	<i>nya</i>	<i>kae.tca</i>
3pl.M	evening	FUT	hunt

The men will be hunting this evening.

Most commonly, however, *nya* combines with the particle *kua* to express generic future tense. If *nya* co-occurs with *kua*, it follows the imperfective marker. The combined particle *kua.nya* can be used to refer to both the immediate future (ex. 6.26a) and the remote future (ex.6.26b).

(6.26) a. *Tcoa.n ʔii.re kua.nya ʔae kũũ.*

tcoa.n ʔii.re kua.nya ʔae kũũ

1pl all **FUT** home go

We (all of us, men) will go to the village.

b. *Glae.tco ti kua.nya see kari.se t'u.nye.*

glae.tco ti kua.nya see kari.se t'u.nye

woman 1sg **FUT** take INTENS beautiful:COP

The woman I will marry is very beautiful.

6.3.3 Anterior Particle *ka*

The particle *ka* is used in generic past tense statements, and functions as an anterior that may combine with any other TAM, except for the future *nya*. It precedes the verb in Slot 1 and follows the imperfective *kua* in cases where both co-occur. Examples (6.27) below show the use of the anterior particle as generic past tense marker:

(6.27) a. *Kx'ao.tco-re ka kx'ai kae.tca.*

kx'ao.tco-re ka kx'ai kae.tca

man-pl **ANT** before hunt

They hunted before.

b. *Xa kx'ui ka lĩã-re ka lam-e.*

xa kx'ui ka lĩã-re ka lam-e

DEM language **ANT** child-pl by hear-PASS

The language was heard by the children.

c. *Kwelo ka ʔe.ba kũũ-kaxu.*

kwelo ka ʔeba kũũ-kaxu

school **ANT** 3sg.M go-CAUS

He walked him to school.

In the data, *ka* was found combining with the imperfective *kua* (6.28.a), with the perfect *-ha* (6.28.b), and with the past tense suffix *-hĩ* (6.28.c).

(6.28) a. *Xa tshaa kua ka tsãã.*

<i>xa</i>	<i>tshaa</i>	<i>kua</i>	<i>ka</i>	<i>tsãã</i>
DEM	water	IPFV	ANT	hot

That water was hot.

b. *Tire ʔuu.xae ʔo ka xam mũũ-a-ha.*

<i>tire</i>	<i>ʔuu.xae</i>	<i>ʔo</i>	<i>ka</i>	<i>xam</i>	<i>mũũ-a-ha</i>
1sg	early.morning	OBL	ANT	lion	see-J-PRF

I saw a lion early in the morning.

c. *ʔE.be ka kx'ai.o ʔnyũũ-a-hĩ.*

<i>ʔe.be</i>	<i>ka</i>	<i>kx'ai.o</i>	<i>ʔnyũũ-a-hĩ</i>
3sg.M	ANT	before	eat-J-PST

He started eating before.

Unlike other TAM markers, *ka* also occurs in non-verbal clauses, especially with the existential copula *hãã* (ex. 6.29.a) and the possessive copula *ua.na* (ex. 6.29.b). It then triggers a past tense reading.

(6.29) a. *Tuu.ʔa.ka ka |ʔee habee.*

<i>tuu.ʔa.ka</i>	<i>ka</i>	<i> ʔee</i>	<i>habee</i>
long.ago	ANT	fire	NEG.EXIST

Long ago there was no fire.

b. *ʔE.be ka mari ua.na*

<i>ʔe.be</i>	<i>ka</i>	<i>mari</i>	<i>ua.na</i>
3sg.M	ANT	money	have

He had money.

6.3.4 The Suffixes *-ha* and *-hĩ*

Tjwao has two primary suffixes occupying the postverbal Slot 2: The perfect/past *-ha* (6.30a-b) and the past tense *-hĩ* (6.30c-d).⁸⁵ Both are suffixed to the verb stem using the juncture morpheme.

(6.30) a. *Nare ʔana-ha?*

nare ʔana-ha
 who know:J-PRF
 Who knows?

b. *Kari.se wu tshaa tire kx'aa-ha.*

kari.se uu tshaa tire kx'aa-ha
 INTENS DEM water 1sg drink:J-PRF
 I drank too much of that water.

c. *Tsxoax'ũũ ndzoro.a tcoa-re haa k'oxo k'ũũ-hĩ.*

tsxoax'ũũ ndzoro.a tcoa-re haa k'oo.xo kx'ũũ-a-hĩ
 elephant kill after person-pl come:J meat collect-J-PST
 After the elephant was killed, the people came to collect the meat.

d. *ʔUu e.tsara tolo kũũ-a-hĩ.*

ʔuu ʔe.tsara tolo kũũ-a-hĩ
 morning 3du.M store go-J-PST
 In the morning, we went to the shop.

Andrason and Phiri (2018) note that it is problematic to define the exact function of the two grammatical suffixes *-ha* and *-hĩ* because they appear in numerous contexts. The two suffixes happen to share the function of experiential present perfect, definite past, stative and present (Ibid. 269-270). While *-hĩ* is typical for the narrative remote past, *-ha* is used to express inclusive and resultative present perfect. In the following sub-sections I will describe the two suffixes in detail.

⁸⁵ The suffixes *-ha* and *-hĩ* in Tjwao have been analysed by Andrason and Phiri (2018). The reader is referred to this article for a detailed analysis. Most examples used in this sub-section and the following sub-sections as well as the analysis of the suffixes *-ha* and *-hĩ* are cited verbatim from that paper.

6.3.4.1 Perfect *-ha*

In Tjwao, the suffix *-ha* has numerous functions which all correspond to the semantics of a perfect. The suffix *-ha* typically denotes the resultative present perfect. It expresses a dynamic anterior action whose effects persist since the moment of its occurrence. In the example below, the speaker is not remembering a certain matter, and the fact he forgot is of present relevance. Thus, the event being described (FORGET) relates to the present because its results are still noticeable.

- (6.31) *ʔE.be ʔuru-a-ha.*
 ʔe.be ʔuru-a-ha
 3sg forget-J-**PRF**
 He has forgotten.

The suffix *-ha* can also function to express an experiential perfect (ex. 6.32). In such cases, it is not the results of an action that remain unchanged and hence relevant. It is rather the overall experience of having, or not having performed the action, that is important for the subject and his/her current state and/or cognitive reality (Andrason and Phiri 2018: 277).

- (6.32) a. *Tire kx'oo.xo ʔnyũũ-a-ha.*
 tire kx'oo.xo ʔnyũũ-a-ha
 1sg meat eat-J-**PRF**
 I have eaten meat (in general in my life).

The suffix *-ha* can also express inclusive present perfect. In this semantic context, an activity is introduced that has been occurring since a certain moment in the past until the present. This is illustrated in example (6.33) below.

- (6.33) *Tuu ʔe ʔona ʔe |am-re tuu-a-ha.*
 tuu ʔe ʔona ʔe |am-re tuu-a-ha
 rain 3sg.C three ? day-pl rain-J-**PRF**
 It has been raining for three days (lit. 'Rain has been raining for three days.)

Apart from expressing the resultative perfect and inclusive perfect, the suffix *-ha* can also denote an event that happened immediately prior to the time of reference. To illustrate both

contexts, two examples are presented below. In example (6.34a), hearing a noise from the cooking place, the speaker asks, perplexed, about its origin. In the same way, in (6.34b), the speaker enquires about an event that must have occurred a few seconds earlier (see Andrason and Phiri 2018: 278).

- (6.34) a. *Tca nao hĩ-a-ha?*
tca nao hĩ-a-ha
 2sg what do-J-PRF
 What did you do?

- b. *Nlee nao hĩ-a-ha?*
nlee nao hĩ-a-ha
 now what do-J-PST
 What just happened?

Furthermore, *-ha* may express past with stative verbs: its default reading is present, especially a present state. In such cases, the suffix expresses qualities of the subject that can be either temporary or permanent, for instance, being tired (6.35a), broken/dead (6.35b), or fat (6.35c).

- (6.35) a. *Tire tsxãã-ha.*
tire tsxãã-ha
 1sg tired:J-PRF
 I am tired.

- b. *Mota k'ao.tco de ʔoo-ha.*
mota k'ao.tco de ʔoo-ha
 car man POSS die:J-PRF
 The man's car is broken (lit. is dead).

- c. *Ii gee tsao-a-ha.*
ii gee tsao-a-ha
 DEM cow fat-J-PRF
 This cow is fat.

Like the imperfective particle *kua*, the suffix *-ha* cannot be directly negated. Instead, the negative perfect suffix *-tam* is used. While *-tam* occupies the postverbal slot of the perfect suffix, it does not take the juncture morpheme. Examples for occurrence of the negative perfect suffix *-tam* are listed below.

(6.36) a. *ʔUi.ka ʔe.tsara kũũ-tam.*

<i>ʔui.ka</i>	<i>ʔe.tsara</i>	<i>kũũ-tam</i>
yesterday	3du.C	go-NEG.PRF

Yesterday they did not go.

b. *ʔE.m tɬxai-re mũũ-tam.*

<i>ʔe.m</i>	<i>tɬxai-re</i>	<i>mũũ-tam</i>
3sg.M.GEN	eye-pl	see-NEG.PRF

He was blind (lit. His eyes could not see).

c. *Kae.tca-tco yee mũũ-tam, xa yee a lx'ae.*

<i>kae.tca-tco</i>	<i>yee</i>	<i>mũũ-tam,</i>	<i>xa</i>	<i>yee</i>	<i>a</i>	<i>lx'ae</i>
hunt-AG	hole	see-NEG.PRF	DEM	hole	LOC	fall

The hunter did not see the hole and fell inside that hole.

6.3.4.2 Past *-hĩ*

In Tjwao, the past tense suffix *-hĩ* is found in various contexts, including both recent and remote past. In examples (6.37a-b) below, *-hĩ* encodes actions or states that occurred right before what can be referred to as the “linguistic now” or present (Kilian-Hatz 2008). They are understood to have happened on the day of speaking, or on the day being referred to.

(6.37) a. *Tshaa ʔe.ce djira-na-hĩ.*

<i>tshaa</i>	<i>ʔe.ce</i>	<i>djira-na-hĩ</i>
water	3sg.F	ask-J-PST

She (just) asked for water.

b. *Tcoa.na |am tsua-re |k'ũũ-a-hĩ ʔuu.pakela*

<i>tcoa.na</i>	<i> am</i>	<i>tsxoa-re</i>	<i> x'ũũ-a-hĩ</i>	<i>ʔuu.pakela</i>
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1sg.C two elephants-pl kill-J-PST this.morning
 We shot two elephants [...] this morning.

The suffix *-hĩ* is regularly used with actions or states that happened on the day before the time of reference, that is, in what is often referred to as “recent past” (cf. Kilian-Hatz 2008 for Khwe, Fehn 2016 for Ts’ixa). In the examples below, the temporal frame is set by the adverbial *ʔui.ka* ‘yesterday’. The actions encoded may also be understood as perfective past, that is, punctiliar actions, complete actions and temporarily bounded actions.

(6.38) a. *ʔE.be ʔui.ka ʔam-ta tco mĩũ-a-hĩ.*

<i>ʔe.be</i>	<i>ʔui.ka</i>	<i>ʔam-ta</i>	<i>tco</i>	<i>mĩũ-a-hĩ</i>
3sg.M.NOM	yesterday	hear-NEG.IPFV	person	see-J-PST

Yesterday he saw a deaf man.

b. *Kx’ao mini ti de ʔui.ka ʔoo-hĩ.*

<i>kx’ao</i>	<i>mini</i>	<i>ti</i>	<i>de</i>	<i>ʔui.ka</i>	<i>ʔoo-hĩ</i>
male	goat	1sg	POSS	yesterday	die:J-PST

Our male goat died yesterday.

c. *ʔE.be ʔe.m tcaa.xu ʔui.ka mĩũ-a-hĩ.*

<i>ʔe.be</i>	<i>ʔe.m</i>	<i>tcaa.xu</i>	<i>ʔui.ka</i>	<i>mĩũ-a-hĩ</i>
3sg.M.NOM	3sg.M.GEN	older.sibling	yesterday	see-J-PST

He saw his brother yesterday.

The suffix *-hĩ* also expresses pluperfect (Andrason and Phiri 2018: 275). In the examples below, *-hĩ* encodes a past event that chronologically came before another past event (6.39a), as well as a past event from a mental space that is already located in the past (cf. 6.39b).

(6.39) a. *ʔUi.ka ʔe.tsara tolo kũũ-a-hĩ ʔe.be ʔxao ʔuru-a-hĩ.*

<i>ʔui.ka</i>	<i>ʔe.tsara</i>	<i>tolo</i>	<i>kũũ-a-hĩ</i>	<i>ʔe.be</i>	<i>ʔxao</i>	<i>ʔuru-a-hĩ</i>
yesterday	3du.M	store	go- J-PST	3.SG.M	spear	forget-J-PST

Yesterday they went to the shop because he had forgotten the spear

b. *ʔUi.ka ʔe.be tia boori na ngee-ta dzini ʔe.m hĩ-a-hĩ.*

<i>ʔui.ka</i>	<i>ʔe.be</i>	<i>ti.a</i>	<i>boori-na</i>	<i>ngee-ta</i>	<i>dzini</i>
yesterday	3sg.M	1sg.ACC	tell-TAM	pass-NEG.IPFV	day
<i>ʔe.m</i>	<i>hĩ-a-hĩ</i>				
3sg.M	do-J-PST				

Yesterday he told me that he had already done it a day earlier (lit. past day)

When speakers were asked to provide the notion of “a long time ago” (ex. 6.40a below), they also used the suffix *-hĩ*, indicating its function as a marker of the remote past (Andrason and Phiri 2018). Sometimes, the adverbial *kx'ai* ‘before’ is added (ex. 6.40b-c).

(6.40) a. *ʔE.kua ndjuu ʔan-a-hĩ.*

<i>ʔe.kua</i>	<i>ndjuu</i>	<i>ʔan-a-hĩ</i>
3pl.M	house	build-J-PST

They built a house (long ago).

b. *Tire kx'ai ʔe ʔam-a-hĩ.*

<i>tire</i>	<i>kx'ai</i>	<i>ʔe</i>	<i>ʔam-a-hĩ</i>
1sg	before	3sg.C	hear-J-PST

‘I heard it before.’

c. *Maa-re kua kx'ai ndjaa-hĩ.*

<i>maa-re</i>	<i>kua</i>	<i>kx'ai</i>	<i>ndjaa-hĩ</i>
woman-pl	IPFV	before	dance:J-PST

The women were dancing before.

In its function as remote past, *-hĩ* typically appears in personal life narratives (ex. 6.41a) and folk tales (ex. 6.41b) recorded with speakers of Tjwao.

(6.41) a. *Baa.re kua ka dorobo ʔe kua cinga. Baba.re ti.a tsii-kaxu-na-hĩ.*

<i>Baa.re</i>	<i>kua</i>	<i>ka</i>	<i>dorobo</i>	<i>ʔe.be</i>	<i>kua</i>	<i>cinga.</i>	<i>Baba.re</i>
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father IPFV ANT town 3sg.M IPFV work grandfather
ti.a tsii-kaxu-na-hĩ

1sg.ACC grow.up-CAUS-J-PST

My father worked in town. It was my grandfather who raised me.

b. *Ii.tshee dzini ka Djo|ua-be ʔe.be kua kae.tca-se ʔe.be g|aro-m ʔae ʔa ʔe.be sii-a-hĩ.*

<i>ii.tshe</i>	<i>dzini</i>	<i>ka</i>	<i>Djo ua-be</i>	<i>ʔe.be</i>	<i>kua</i>	<i>kae.tca-se</i>
one.day	day	OBL	PN-sg.M	3sg.M	IPFV	hunt-ADVZ
<i>ʔe.be</i>	<i>g aro-m</i>	<i>ʔae</i>	<i>ʔa</i>	<i>ʔe.be</i>	<i>sii-a-hĩ</i>	
3sg.M	ostrich-sg.M	home	OBL	3sg.M	arrive-J-PST	

One day, when Djolua'be went to hunt, he arrived at the ostrich's home.

Similar to *-ha*, *-hĩ* is negated with the suffix *-tam* which takes the place of the juncture morpheme. Examples (6.42) below illustrate the negation of typical past tense contexts previously shown to exist in the affirmative:

(6.42) a. *ʔE.tsara kx'ui-a lx'ae-tcu-tam-hĩ.*

<i>ʔe.tsara</i>	<i>kx'ui-a</i>	<i>lx'ae-tcu-tam-hĩ</i>
3du.M	speak-J/CONJ	meet-REC-NEG-PST

They could not agree.

b. *Ii.tshee ʔuu xam tire mĩũ-tam-hĩ.*

<i>ii.tshee</i>	<i>ʔuu</i>	<i>xam</i>	<i>tire</i>	<i>mĩũ-tam-hĩ</i>
DEM.day	morning	lion	1sg	see-NEG-PST

I did not see the lion in the morning.

c. *ʔe.m kua ka tcii ʔa.ka tcuba-o kũũ-tam-hĩ.*

<i>ʔe.m</i>	<i>kua</i>	<i>ka</i>	<i>tcii</i>	<i>ʔa.ka</i>	<i>tcuba-o</i>	<i>kũũ-tam-hĩ</i>
3sg.M	IPFV	ANT	be.sick	because	field-LOC	go-NEG-PST

Because he was sick, he did not go to the field.

With some verbs, *-tam-hĩ* is also found expressing negative perfect, as shown by examples (6.43a-c) below:

- (6.43) a. *Tire tsxãã-tam-hĩ.*
tire tsxãã-tam-hĩ
 1sg be.tired-NEG-PST
 I am not tired.
- b. *Ii gee tsao-tam-hĩ.*
ii gee tsao-tam-hĩ
 DEM cow be.fat-NEG-PST
 This cow is not fat.
- c. *Tire ?e.ba ?ana-tam-hĩ.*
Tire ?e.ba ?ana-tam-hĩ
 1sg 3sg.M.ACC know-NEG-PRF
 I do not know him.

6.3.5 The Completive *-xu*

Tjwao has a completive/terminative suffix *-xu* that requires a juncture morpheme when attached to the main verb. In English, verbs derived from the suffix *-xu* can also be translated into ‘do something completely’. The suffix *-xu* “changes the lexical aspect of a verb in rendering atelic states of affairs telic” (Fehn 2016: 170). The imperfective marker *kua* can be used with verbs derived with *-xu* (ex. 6.44a). The use of *-xu* in Tjwao is exemplified in (6.44) below.

- (6.44) a. *Mbutaa kua xue-a doa ngee-xu.*
mbutaa kua xue-a doa ngee-xu
 hare IPFV run-CONJ kudu exceed:J-COMPL
 The hare outruns the kudu.
- b. *Tire mari ti de gam-a-xu-na-ha.*
tire mari ti de gam-a-xu-na-ha

1sg money 1sg POSS throw-J-COMPL-J-PRF
 I threw my money away.

c. *Maa.re tshaa ngunu.ka nyũã-xu-na-ha.*

maa.re *tshaa* *nguu.ka* *nyũã-xu-na-ha*
 woman water away pour:J-COMPL-J-PRF

The woman poured the water away.

6.4 Valency-related Morphemes

In Tjwao, valency-altering suffixes may be ‘valency increasing’ or ‘valency decreasing’. The suffixes can either follow the verb root or be attached to it by means of the juncture morpheme (see section 6.2). The collected corpus shows that there are five valency-altering suffixes in Tjwao: benefactive⁸⁶, causative (1), causative (2), causative (3), reflexive, reciprocal, directive-locative, and passive. In addition to these, Tjwao mirrors other Kalahari Khoe languages in using reduplication as a peripheral strategy to express causative (see also Kilian-Hatz 2008, Vossen 2013, Fehn 2016). For reasons of convenience, reduplicated causatives will also be discussed within the frame of this chapter, although they differ formally from causatives derived by means of suffixes.

As has been noted above (see section 6.2), two suffixes, the benefactive *-ma* and the completive *-xu*, require the juncture morpheme. In consequence, the completive suffix *-xu* can be distinguished from the formally identical causative *-xu* by the way it attaches to the verb root.

The collected evidence shows that sometimes valency-changing morphemes can be combined and attached to a single verb root in Tjwao. This phenomenon is called stacking (cf. Fehn 2016: 155) and is more common in Khoe languages (Vossen 1997, 2013). In examples (6.45a) and (6.45b) below, there is a combination of reciprocal and causative suffixes. In (6.45a) the causative *-kaxu* has scope over *khae-tcu* ‘fight with each other’, while in (6.45b), the reciprocal *-tcu* has scope over *?nyũũ-kaxu* ‘feed’, that is, ‘cause to eat’. Example (6.4c) shows a combination of the benefactive *-ma* and completive *-xu*, both of which are linked to verb by a juncture morpheme.

⁸⁶ Vossen (2013: 232) terms this verbal extension DATIVE and notes that dative verb stems convey benefactive meaning. In this study, BENEFACTIVE is used, as it is the suffix’s sole function.

(6.45) a. *Ti kua ii karo-are khae-tcu-kaxu.*

<i>ti</i>	<i>kua</i>	<i>ii</i>	<i>karo-are</i>	<i>khae-tcu-kaxu</i>
1sg	IPFV	DEM	boy-pl	fight-REC-CAUS

I am making the boys fight.

b. *Tsabe kua ?nyũũ-kaxu-tcu.*

<i>tsabe</i>	<i>kua</i>	<i>?nyũũ-kaxu-tcu</i>
1du.M	IPFV	eat-CAUS-REC

We are feeding each other.

c. *Gara ?e.ba ʎx'aa-xu-na-ma.*

<i>gara</i>	<i>?e.ba</i>	<i>ʎx'aa-xu-na-ma</i>
plate	3sg.M	wash:J-COMPL-J-BEN

He washed the plates for him.

6.4.1 Valency-changing Extensions

Valency-altering suffixes may change the structure of the predicate arguments a verb may take. Some derivative suffixes affect the argument structure by increasing the valency, while others (e.g., passive) decrease the valency. Transitivity plays a significant role when dealing with the topic of valency change because some valency-altering suffixes can only be attached to transitive verbs, while others may attach to both transitive and intransitive verbs.

6.4.1.1 Valency Increasing Extensions

When valency increasing extensions are attached to the verb stem, they change the argument structure by demanding the addition of one or more complements in the sentence structure. The causative and the benefactive are valency-increasing extensions. In the following sub-sections, the use of these two suffixes in Tjwao is discussed in detail.

(a) Causative

In Tjwao, two causative suffixes are found: (a) *-kaxu* and (b) *-xu*. Their semantic effect on non-derived verb states is exemplified in Table 9 below:

Table 9: Tjwao causatively extended verbs

Non-causative Verb Stem	Causative Suffix	Causatively Extended Verb Stem	Meaning of the Causatively Extended Verb
<i>tsãã</i>	<i>-xu</i>	<i>tsãã-xu</i>	cause to boil
<i>loo</i>	<i>-kaxu</i>	<i>loo-kaxu</i>	cause to end
<i>ʔue</i>	<i>-xu</i>	<i>ʔue-xu</i>	cause to break
<i>tsii</i>	<i>-kaxu</i>	<i>tsii-kaxu</i>	cause to grow up

The evidence suggests that only *-kaxu* is productive, that is, it can combine with an open class of transitive and intransitive verbs as illustrated in examples (6.46a-b). In contrast, *-xu* appears in lexicalised forms, such as *tsãã.xu* ‘cook’, that is, ‘make boil’ or *ʔue.xu* ‘break something (vt)’ (ex. 6.46c-d).

(6.46) a. *ʔUi tci haa ti kua tca tsãã-xu-na-ma.*

ʔui tci haa ti kua tca tsãã-xu-na-ma
 evening 2sg.M come 1sg IPFV 2sg.M boil-CAUS-J-BEN

When you come in the evening, I will cook for you.

b. *Tire ii ʔyũũ loo-kaxu-na-ha.*

tire ii ʔyũũ loo-kaxu-na-ha
 1sg DEM food end-CAUS-J-PRF

I finished the food.

c. *Tcoa.re kx'oo.xo tsãã-xu-na-ha*

tcoa.re kx'ooxo tsãã-xu-na-ha
 1pl.C meat boil-CAUS-J-PRF

We cooked the meat.

d. *lũã-re gilasi ʔue-xu-na-ha*

lũã-re gilasi ʔue-xu-na-ha.
 child-pl glass break-CAUS-J-PRF

The children broke the glass.

The suffix *-kaxu* occurs with activity verbs and motion verbs. In examples (6.47a-b), action verbs are combined with the suffix. Example (6.47c-d) illustrates a case where *-kaxu* occurs with motion verbs.

(6.47) a. *ʔE.ba kx'āĩ-kaxu.*
ʔe.ba kx'āĩ-kaxu
 3sg.M laugh-CAUS
 Make him laugh!

b. *ʔE.be kua ti.a tcira-kaxu.*
ʔe.be kua ti.a tcira-kaxu
 3sg.M IPFV 1sg.O vomit-CAUS
 He makes me vomit.

c. *ʔAe ti kua tca kũũ-kaxu.*
ʔae ti kua tca kũũ-kaxu
 home 1sg IPFV 2sg go-CAUS
 I will take you home.

d. *ʔE.ba xue-kaxu.*
ʔe.ba xue-kaxu
 3sg.M run-CAUS
 Make him run!

In terms of valency, the addition of *-xu* and *-kaxu* increases the verb's argument structure by one participant. In example (6.48a) below, the intransitive verb *xue* 'to run' is rendered transitive, that is, it takes *baa.ra* 'father' as its object argument. In example (6.48b), the transitive verb *tsāā.xu* 'cook' becomes ditransitive and now takes two direct object arguments: a "recipient" argument *Phiri-ba*, and a "theme" argument *baa.tshaa* 'beer'.

(6.48) a. *!Ũã-rera baara xue-kaxu-na-ha.*

lũã-rera *baara* *xue-kaxu-na-ha*
 child-pl father run-CAUS-J-PRF
 ‘The children made the father run.’

b. *Vundla-be Phiri-ba baa.tshaa tsãã.xu-kaxu-na-ha.*

Vundla-be *Phiri-ba* *baa.tshaa* *tsãã.xu-kaxu-na-ha*
 Vundla-sg.M Phiri-sg.M beer cook-CAUS-J-PRF
 ‘Vundla made Phiri brew (lit. cook) beer.’

In addition to the suffixes *-kaxu* and *-xu*, it is also attested in the corpus that reduplication can also be used to derive causatives. However, this mechanism is not productive as there is only one verb that shows reduplication, for instance, *lx'ue.lx'ue* ‘fill’ (from *lx'ue* ‘full’). It is nevertheless cited here, due to the wide distribution and classificatory importance of causative reduplication in the Khoe language family.

(6.49) *Tshaa ka ʔama ʔe.be lx'ue.lx'ue-na-ha.*

tshaa *ka* *ʔama* *ʔe.be* *lx'ue.lx'ue-na-ha*
 water with pot 3sg.M full:CAUS-J-PRF
 He filled the pot with water.

(b) Benefactive

It is attested in Tjwao that the benefactive suffix is *-ma*. This morpheme requires the juncture morpheme when attaching it to the verbal stem. In the examples (6.50a-c), when *-ma* ‘benefactive’ is added to the verb stem, an additional object is required which is typically interpreted as a beneficiary.

(6.50) a. *Ti kua tca cinga-na-ma.*

ti *kua* *tca* *cinga-na-ma*
 1sg IPFV 2sg.M work-J-BEN
 I work for you.

b. *Tcoa ka ʔii.ye ti kua ʔyoa-na-ma.*

tcoa *ka* *ʔii.ye* *ti* *kua* *ʔyoa-na-ma*

person ATTR all 1sg IPFV ask-J-BEN
I am asking for the people.

c. *ʔE.m baa ʔe.ba kua tcũũ-a-ma.*

ʔe.m baa ʔe.ba kua tcũũ-a-ma
3sg.M father 3sg.M IPFV roast-J-BEN
He is roasting (meat) for his father.

With intransitive verbs, *-ma* leads to the addition of a direct object, which, in the case of motion verbs, does not always fall within the semantic range of a beneficiary (ex. 6.51 a). As illustrated in examples (6.51b-c) with transitive verbs, suffixation of *-ma* results in a double object construction in which the beneficiary fills the role of the “recipient”.

(6.51) a. *Kx'ao.tco-re kua |hii xue-ma.*

kx'ao.tco-re kua |hii xue-ma
man-pl IPFV rhino run:J-BEN
The men run away from the rhino (lit. run for the rhino).

b. *Balisi ʔe.ce kua maa.tco-re tcaru kaa-ma.*

Balisi ʔe.ce kua maa.tco-re tcaru kaa-ma
Balisi 3sg.F IPFV woman-pl firewood collect.firewood:J-BEN
Balisi (f.) is fetching firewood for the women.

c. *Msindo ʔe.be kua tcoa-rera baa.tshaa |ʔanya-ma.*

Msindo ʔe.be kua tcoa-rera baa.tshaa |ʔanya-ma
Msindo 3sg.M IPFV person-pl beer buy:J-BEN
Msindo is buying people beer.

(c) Locative

In Tjwao the suffix *-o* implies directionality as illustrated in example (6.52a), or locality as in example (6.52b) in the action that is performed. The suffix *-o* is attached directly to the verb stem. Most Khoe languages have a directive/locative suffix *-o* (Vossen 1997, Kilian-Hatz 2008) which is sometimes interpreted as a valency-decreasing derivation (Fehn 2016: 162). In

Tjwao as illustrated in example (6.52a) and example (6.52b), the suffix *-o* does not affect the valency of the verb it attaches to.

- (6.52) a. *ʔE.be mubeda ngabi-o-na-ha.*
ʔe.be mubeda ngabi-o-na-ha
 3sg.M bed turn-LOC-J-PRF
 He turned the bed over.

- b. *Glee.xu kua ʔe.ci laa lx'aa-o.*
glee.xu kua ʔe.ci laa lx'aa-o
 woman IPFV 3sg.F belly wash-LOC
 The woman is washing (on) her belly.

6.4.1.2 Valency-decreasing Extensions

The three valency-decreasing suffixes attested in Tjwao are the reflexive, the reciprocal, and the passive.

(a) Passive

In Tjwao, the passive is realised with the suffix *-e*, a common derivation suffix with cognate forms in all Khoe languages (Vossen 1997). Like other derivational suffixes, it is directly attached to verb stem. Even when it is followed by the past suffix, the passive does not co-occur with the juncture morpheme (see section 6.2). In examples (6.53a) and (6.54a), an active clause is contrasted with its passive counterpart, (6.53b) and (6.54b), respectively. The Tjwao passive is agentive, that is, it allows for addition of the agent – which corresponds to the subject of an active voice – as peripheral participant marked by the oblique suffix *ka* (6.53 b). Addition of the agent is, however, optional as illustrated in example (6.54 b).

- (6.53) a. *Vundla-be lĩã lk'am-a-ha.* (Active)
Vundla-be lĩã lk'am-a-ha
 PN-sg.M child beat-J-PRF
 Vundla hit the child.

- b. *Vundla-m ka lĩã lk'am-e-ha.* (Passive)

<i>Vundla-m</i>	<i>ka</i>	<i>ũã</i>	<i>ℓx'am-e-ha</i>
PN-sg.M	OBL	child	beat-PASS-PRF

The child was beaten by Vundla.

(6.54) a. *Dini ti tcaa.xo paa-ha.* (Active)

<i>dini</i>	<i>ti</i>	<i>tcaa.xo</i>	<i>paa-ha</i>
bee	1sg	brother	bite:J-PRF

The bee stung my brother.

b. *Ti tcaa.xu ka paa-e-ha.* (Passive)

<i>ti</i>	<i>tcaa.xo</i>	<i>ka</i>	<i>paa-e-ha</i>
1sg	brother	ANT	bite-PASS-PRF

My brother was stung.

(b) Reciprocal

Tjwao has a reciprocal suffix *-tcu* which is linked directly to the verb stem. The reciprocal denotes an action that is performed reciprocally by an entity upon another and vice versa. In reciprocal clauses, the subject simultaneously functions as the object: the subject of the reciprocalised verb “becomes plural because two (or more) participants in the action are at the same time agent of their own action and goal/recipient of the other’s action” (Mutaka and Tamanji 2000: 181). In Tjwao, transitive verbs receiving a reciprocal suffix are rendered intransitive. In example (6.55a-c) below, the suffix *-tcu* is shown attaching to transitive verbs. All subject noun-phrases are in the plural (or dual), as is expected for a reciprocal derivation. Additionally, *-tcu* indicates that two or more participants of the verb perform the action being described on one another. When the reciprocal suffix precedes the past suffix *-hĩ* as illustrated in example (6.55a), it is connected to the past suffix by the juncture morpheme.

(6.55) a. *ʔE.na maa-tcu-na-hĩ.*

<i>ʔe.na</i>	<i>maa-tcu-na-hĩ</i>
3pl.C	give-REC-J-PST

They gave each other (a gift).

b. *Kx'ao.tco-ro kua khai-tcu.*

kx'ao.tco-ro *kua* *khai-tcu*
 man-pl IPFV fight-REC

The men are fighting with each other.

c. *?E.tsara kua tcii-tcu.*

?e.tsara *kua* *tcii-tcu*
 3du.M IPFV call-REC

They are calling each other.

(c) Reflexive

In Tjwao, the suffix *-hĩ* expresses reflexive and it is suffixed directly to the verb stem. A prototypical reflexive denotes an action that the subject of the clause inflicts on itself. Semantically, this means that agent and experiencer are the same individual. In other words, in a reflexive construction, two arguments in action relate to the same entity or have identical reference. The data from Tjwao further suggests that the reflexive *-hĩ* may be used productively to derive anti-causative meanings. It may therefore be a valency-decreasing suffix. The subject noun-phrase may be in singular (ex. 6.56a-b) or plural (ex. 6.56c-d). As illustrated in the examples below, the relation is anaphoric, in that, the first participant is the same as the second one.

(5.56) a. *Ti kua mĩũ-hĩ.*

ti *kua* *mĩũ-hĩ*
 1sg IPFV see-REFL

I see myself.

b. *Glee.xu kua ndjuu a lx'aa-hĩ.*

glee.xu *kua* *ndjuu* *a* *lx'aa-hĩ*
 woman IPFV house LOC wash-REFL

She took a bath (lit. washed herself) at the house.

c. *Glee.tco-re kua mĩũ-hĩ.*

glee.tco-re *kua* *mĩũ-hĩ*
 women-pl IPFV see-REFL

The women see themselves.

d. *Tcoa-re kua kue o lx'aa-hĩ.*

<i>tcoa-re</i>	<i>kua</i>	<i>kue</i>	<i>o</i>	<i>lx'aa-hĩ</i>
person-pl	IPFV	river	LOC	wash-REFL

People are bathing in the river.

The corpus shows that in Tjwao, the object of the transitive verb may take the position of the subject of the anti-causative derivation (cf. 6.57a); however, there are no implications of an underlying agent (also see Haspelmath 1987, Dixon and Aikhenvald 2000).

(6.57) a. **mũũ ‘to see’ > mũũ-hĩ ‘to look’**

Uu tcaa.tco ʔe tcana mũũ-hĩ-ta.

<i>uu</i>	<i>tcaa.tco</i>	<i>ʔe</i>	<i>tcana</i>	<i>mũũ-hĩ-ta</i>
DEM.dist	elder	3sg.C	?well	see-REFL-NEG.IPFV

That old man does not look well.

To conclude the above discussion of the valency-changing morphemes, an exhaustive list of all valency-altering suffixes found in Tjwao is provided in Table 10 below.

Table 10: Verb Suffixes in Tjwao

Grammatical context	Gloss	Suffix
Benefactive	BEN	<i>-J-ma</i>
Directive-locative	LOC	<i>-o</i>
Causative (1)	CAU	<i>-xu</i>
Causative (2)	CAUS	<i>-kaxu</i>
Causative (3)	REDUPL	<i>verb.root-verb.root</i>
Benefactive	BEN	<i>-J-ma</i>
Directive-locative	LOC	<i>-o</i>
Passive	PASS	<i>-e</i>

Reciprocal	REC	<i>-tcu</i>
Reflexive	REFL	<i>-hĩ</i>

CHAPTER SEVEN: GRAMMATICALISATION OF NOMINALS AND VERBALS

This chapter focuses on the characteristics of those linguistic units that have undergone grammaticalisation in Tjwao, including an in-depth analysis of their function and grammaticalisation paths. I will contextualise my own data with examples from other Kalahari Khoe languages, as well as with evidence from other language families. Section 7.1 discusses the grammaticalisation of nouns. In section 7.2, the grammaticalisation of verbs is discussed in detail. Section 7.3 presents generalisations regarding grammaticalisation tendencies in Tjwao, while section 7.4 provides a summary of grammaticalisation in Tjwao from a historical perspective.

7.1 Grammaticalisation of Selected Tjwao Nouns

Nouns can be shown to be the historical sources for a subset of grammatical morphemes in Tjwao. Apart from the Proto-Khoe-Kwadi form **kho(e)* ‘person’, all source items still exist as full nouns in Tjwao. In the following sections, each grammaticalisation path is discussed individually.

7.1.1 The First Person Plural *tcoa.n*

Tcoa.n(a), which is used as the first-person plural pronoun (cf. 5.2.1), most likely derives from the lexical source *tcoa* ‘person’ by adding the third person plural suffix *-n(a)* (cf. Fehn and Phiri 2017: 110). *Tcoa* ‘person’ is still used as an independent noun in Tjwao and can take nominal suffixes. Fehn and Phiri (Ibid.) suggest that the grammaticalisation of *tcoa* into a pronoun could be a more recent development than the uncommon synonymous form *tsi*, which has cognates in other languages of the Khoe family.

Although the above grammaticalisation path appears to be rare in Kalahari Khoe as such, the noun *khoe* ‘person’ has also grammaticalised into a pronoun in the Khwe dialect ǀAni spoken in northwestern Botswana (cf. Heine 1999: 28, Kuteva *et al.* 2019: 280-281, Heine and Song

2011: 597). In !Ani, the noun *khoe*⁸⁷-*ma* (person-masculine. singular) ‘male person’ is also used as a third person masculine singular pronoun *kho(e)ma* ‘he’ (ex.7.1 a below).

(7.1) a. !Ani (Heine 1999: 28)

[.....] *kana khoe-m hin-!loe kx'ei-he.*

[.....] *kana kxo-m hin-!loe kx'ei-he*

because **person-M:sg** do-HAB manner-F:sg

[The crocodile catches her] because this is the way he (=the crocodile) does it.

The development proposed in Tjwao and !Ani, that is, grammaticalisation from a noun ‘person, man’ to third person pronoun is consistent with the typological proposal by Heine and Kuteva (2009: 280-81). The development person>pronoun is extremely common cross-linguistically and has occurred in Lendu of Central Sudan (cf. Heine and Song 2011: 596), Zande spoken in Zaire (cf. Heine and Reh 1984: 223) and in two Ugandan languages (Alur and Adhola) (cf. Heusing 2004: 218).

7.1.2 The Agent Suffix *-tco*

The suffix *-tco* deriving nomina agentis (cf. 5.5.2) can probably be traced to a noun *tco* ‘person’ which no longer exists as a full noun in modern Tjwao but is probably cognate with **kho(e)* ‘person’ attested across the Khoe-Kwadi language family.

While Kalahari Khoe languages that have grammaticalised an agent noun suffix from a noun ‘person’ still use *khoe* to express the meaning ‘person’, the underlying development pathway can probably be extended to Tjwao. In Khwe (Kilian Hatz 2008), Naro (Visser 2013) and Ts’ixa (Fehn 2016), the noun *khoe* ‘person’, which is still used as an independent full lexeme, is the historical source of the suffix *-kho(e)*. Similar to its cognate form *-tco* in Tjwao, *-kho(e)* derives *nomina agentis* from verbs. Ts’ixa and Khwe are in the same stage of grammaticalisation as Tjwao as demonstrated by the use of phonetically reduced *-kho* (instead of *-khoe*) by some speakers.

(7.2) a. Khwe (Kilian-Hatz 2008: 91)

⁸⁷ The noun *khoe* ‘person’ can be traced back to proto Khoe-Kwadi and has given its name to the Khoe language family. *Khoe* probably does not constitute a cognate of Tjwao *tcoa* ‘person’ which likely derives from a Kalahari Khoe root **kua* attested with various meanings, including ‘servant’, ‘slave’ and ‘forager’ (Fehn pers. com.).

‖*ae-khoe* ‘teacher’
teach-**AGT**

b. Ts’ixa (Fehn 2016:124)
guni-khoe ‘hunter’
hunt-**AGT**

c. Naro (Visser 2013: 182)
n\am-khoe ‘friend’
love-**AGT**

The transition from the lexeme ‘person’ to a grammatical suffix that derives *nomina agentis* from nouns and verbs is not documented by Kuteva *et al.* (2019). However, there are languages that show a similar development pathway, specifically, Thai (Bisang 1996: 546), American Sign Language (Supalla 1998) and Japanese (Morita 2019: 125).

7.1.3 The Nominaliser *-xu*

The nominalising suffix *-xu* (cf. 5.5.2) developed from the noun *xuu* ‘thing’. Owing to phonetic reduction, the two morae have been shortened to one, leading to a monomoraic suffix *-xu*. The source still exists as full noun that can take nominal suffixes such as the plural marker *-ra* (e.g., *xuu + ra > xuu-ra > things*).

This grammaticalisation of the noun *xuu* ‘thing’ into the derivational nominalising suffix also occurs in other closely related languages of the Kalahari Khoe branch (cf. Khwe (Kilian-Hatz 2008: 90), Naro (Visser 2013: 398-399), and Ts’ixa (Fehn 2016: 122). As in Tjwao, the original lexical source *xuu* ‘thing’ occurs as a full noun in these languages. While Khwe and Ts’ixa resemble Tjwao in phonetically reducing the original form (see ex. 7.3a-b), the bimoraic shape is retained in Naro (see ex. 7.3c).

(7.3) a. Ts’ixa (Fehn 2016:)
tsee-xu ‘truth’
bec.real-**NMZ**

b. Khwe (Kilian-Hatz 2008:91)

kx'oo-xu 'meat'
eat.meat-NMZ

c. Naro (Visser 2013: 403)

kx'aa-xuu 'drinking container'
drink-NMZ

Cross-linguistically, the development of a noun 'thing' to a derivational nominalising marker is common and has been well documented by Kuteva *et al.* (2019: 433). Various languages from other families that show a similar development include Korean (Rhee 2008, 2016c, Kim and Horie 2009, Kim 2012, Sohn and Nam 2013), Ewe (Heine 2019), Tundra Nenets language of northern Russia (Nikolaeva 2014: 316-17) and Northern Mansi spoken in western Siberia (Bíró 2017).

7.1.4 The Diminutive Suffix -*lũã*

The diminutive suffix *lũã* (cf. 5.5.4) is derived from the noun *lũã* 'child'. The lexical source is still used as a full noun in Tjwao and can take nominal modifiers, for instance, the plural suffix *-re* (e.g., *lũã-re* 'children'). The grammatical morpheme maintains the same structure of the nominal form.

The development of a noun **lũã* 'child' (cf. Vossen 1997) to a diminutive suffix in nominal compounds is widespread in Kalahari Khoe languages. In *!Ani* (Heine 1999), Khwe (Kilian-Hatz 2008) and Naro (Visser 2020 p.c.), the form of the lexical source and the grammaticalised suffix are identical, that is, *lũã* 'child' and *-lũã* 'diminutive'. According to Fehn (Fehn 2016), Ts'ixa has a denasalised diminutive suffix *-loa* which is used by a subgroup of speakers. This suggests a further stage of grammaticalisation where the form became simpler through phonetic reduction.

(7.4) a. Khwe (Kilian-Hatz 2008: 92)

kunii-lũã 'small duiker'
duiker-child

b. !Ani (Heine 1999: 56)

! 'uru-!dã 'dove egg'

dove-**child**

c. Ts'ixa (Fehn 2016: 51)

biyee-!ũũ 'young zebra'

zebra-**child**

The grammaticalisation of the lexeme 'child' to a diminutive suffix is common and well documented in different languages of the world, for instance, Venda (Poulos 1990), Londo (Güldemann 1999b), Early Modern Chinese (Long *et al.* 2012) and Korean (Rhee 2016, Rhee 2016c). Typologically, the diminutive 'child' frequently recurs in nominal compounds (Heine and Kuteva 2009: 153f).

7.1.5 Spatial and Temporal Terms: *ndjoro*>back/after and *kx'ai*>front/before

The body part nouns *ndjoro* 'back' and *kx'ai* 'face' have grammaticalised into markers of spatial and temporal relations.

Ndjoro 'back' is used to express both spatial 'behind' (ex. 7.5a) and temporal 'after' concepts (ex. 7.5b). It still exists as a full noun in Tjwao, whereas the grammaticalised morphemes are formally identical to the lexical source.

(7.5) a. *Ndjuu ndjoro a.*

<i>ndjuu</i>	<i>ndjoro</i>	<i>a</i>
house	back	LOC

Behind the house.

b. *?nyũũ ndjoro a tcoa.re kua.nya cingo kũũ.*

<i>?nyũũ</i>	<i>ndjoro</i>	<i>a</i>	<i>tcoa.re</i>	<i>kua.nya</i>	<i>cingo</i>	<i>kũũ</i>
eat	back	LOC	1pl.C	FUT	work	go

After eating we will go to work.

Much the same situation is found in other languages of the Kalahari Khoe branch, where a noun **n†oro* ‘back’ (cf. Vossen 1997) is a frequent historical source for the expression of both ‘behind’ and ‘after’. As in Tjwao, the source forms *n†goro* and *ngyoro* are still preserved in Khwe and Ts’ixa, respectively (cf. Kilian-Hatz 2008: 238, Fehn 2016: 211). Parallel to Tjwao, the form of the lexical source is identical with the grammaticalised morpheme, suggesting a similar stage of grammaticalisation.

(7.6) a. Khwe (Kilian-Hatz 2008: 240)

Ti tĩ ngu-a n†goro ki.

<i>ti</i>	<i>tĩ</i>	<i>ngu-a</i>	<i>n†goro</i>	<i>ki</i>
1sg	stand	house-GEN	back	LOC

I stand behind the house.

b. Ts’ixa (Fehn 2016: 211)

Xam=m ti ngyoro ʔa haana.

<i>xam=m</i>	<i>ti</i>	<i>ngyoro</i>	<i>ʔa</i>	<i>haana.</i>
lion=sg.M	1sg	back	LOC	be.there:STAT

The lion is behind me. (lit.: The lion is in my back.)

Like *ndjoro* ‘back’, the noun *kx’ai* ‘face’ in Tjwao is used to express both spatial ‘in front’ (ex. 7.7) and temporal ‘before’ concepts (cf. 6.3.4.2). It is still preserved and used as a full noun in Tjwao, whereas the grammaticalised form is identical to the form of the lexical source.

(7.7) *Ndjuu kx’ai a |ũã-rera tsũĩ.*

<i>ndjuu</i>	<i>kx’ai</i>	<i>a</i>	<i> ũã-rera</i>	<i>tsũĩ</i>
house	face	LOC	child-pl	be.sitting

The children are sitting in front of the house.

A grammaticalisation path from ‘face’ to ‘front’ is also shared by other languages of the Kalahari Khoe branch, namely, Naro (Visser 2001: 150), Ts’ixa (Fehn 2016:211), Khwe (Kilian-Hatz (2008:238) and Glui (Nakagawa 2013:253). Analogous to Tjwao, in Khwe ‘face’ also denote ‘before’. The lexemes *kx’ai* (Naro, Tjwao), *k’ai* (Ts’ixa), *kx’ei* (Khwe) and *qx’ae* (Glui) are full cognates which can be traced back to a proto form **kx’ai* (cf. Vossen 1997). Like Tjwao, all the above-mentioned languages retain the lexical source with its original meaning,

whereas the grammaticalised form is identical with the source item. Examples for a cross-Kalahari Khoe grammaticalisation of *kx'ai* ‘face’> ‘in front’ are provided in examples (7.8a-d) below.

(7.8) a. Ts’ixa (Fehn 2016:117)

|*U.xu ʔe.m ka k'ai.o=m ʔa tee-na.*

|*u.xu ʔe.m ka k'ai.o=m ʔa tee-na.*

something 3sg.M POSS **face=sg.M** LOC.PROX be.standing-STAT

Something stands in front of him.

b. Khwe (Kilian-Hatz 2008: 240)

Ti tĩ ngu-a kx'ei ki.

ti tĩ ngu-a kx'ei ki

1sg stand house.GEN **face** LOC

I stand in front of a/the house.

c. *Kx'ei tca lõã o lx'aa te kũũ-ve-ra!*

kx'ei tca lõã a lx'aa te kũũ-ve-ra

face 2sg.M child OBL wash 1pl.C go-NEG-II-GER

We will not go before you wash the children!

d. Glui (Nakagawa 2013: 253)

qx'ae~face qx'ae~front

The development of *back>behind>after* and *face>front>before* is typologically common (Heine *et al.* 1991: 124-125, Kuteva *et al.* 2019: 65-66, 166-167).⁸⁸ Examples from various languages that show parallel grammaticalisation paths are Hakka (Long *et al.* 2012), Romance (Fagard and Mardale 2015), Mixtec (Bowers 2020), Korean (Rhee 2016c), Icelandic (Stolz 1992a: 16), Halia (Svorou 1994: 249) and Japanese (Narrog and Rhee 2013).

⁸⁸ According to Gerlach and Berthold (2014: 212) “spatial terms resulting from body parts are also referred to as “grammaticalisations following the *body part model*””.

7.1.6 Grammaticalisations of the Numeral *lui* ‘one’

The numeral *lui* ‘one’ is the source for the formally identical restrictive focus particle *lui* ‘only’ in Tjwao (cf. 5.4.4).

A similar extension of a lexeme *lui* ‘one’ to cover the notion of ‘only’ is attested in Tsixa (Fehn 2016), Khwe (Kilian-Hatz 2008), Kua/Glana (Collins and Chebanne 2008) and Naro (Hessel Visser 2020 p.c.). All languages in question retain the source item, which is formally identical to the derived morphemes. Khwe parallels Tjwao by occasionally attaching an adverbialiser (Khwe *-xa*) to the numeral stem (ex. 7.9c).

- (7.9) a. Kua/Glana (Collins and Chebanne 2016: 78)

Xam-n lui ce kua mũũ.

<i>xam-n</i>	lui	<i>ce</i>	<i>kua</i>	<i>mũũ</i>
lion-pl	one	ISS	PROG	see

I only see lions.

- b. Ts’ixa (Fehn 2016: 93)

ʔe.ma ʔa ||’am lui hĩ-na-ha.

<i>ʔe.ma</i>	<i>ʔa</i>	<i> ’am</i>	lui	<i>hĩ- na-ha</i>
3sg.M	ACC	hit	one	do-J-PST3

[She] only hit him.

- c. Khwe (Kilian-Hatz 2008: 213)

Ngu a lui.xa ti mũũ-a-ha.

<i>ngu</i>	<i>a</i>	lui.xa	<i>ti</i>	<i>mũũ-a-ha</i>
house	O	one.ADV	1sg	see-II-PST1

I have seen only a hut.

Analogous to Tjwao, Tsixa and Khwe also expand *lui* ‘one’ to express ‘alone’ by attaching a productive adverbialiser *-se* or *-xa* to the numeral stem, for instance, *lui-se* ‘alone’.

- (7.10) a. Ts’ixa (Fehn 2016: 93)

lui=se hãã kadi ʔe.

lui=se *hãã* *kadi* *ʔe*
one=ADV be.there hard COP
 Living alone is hard.

b. Khwe (Kilian-Hatz 2008: 213)

Tca lui.xa.

tca ***lui.xa***
 2sg.M **one.ADV**
 You, alone.

The development from a numeral ‘one’ to ‘only, alone’ as attested in Tjwao and other Kalahari Khoe languages is typologically common (Kuteva *et al.* 2019: 298-299, 302) and has been documented in Chinese (Long *et al.* 2012), Lezgian (Haspelmath 1993), English, German, Hausa, and Ewe (Kuteva *et al.* 2019).

Table 11 below provides a comprehensive list of grammatical markers that can be shown to be derived from nouns.

Table 11: Nominal Lexical Sources and the Grammatical Forms

Grammatical Form	Meaning	Source	Meaning
<i>tcoa.n(a)</i>	first person plural	<i>tcoa</i>	‘person’
<i>-tco</i>	agentive suffix	* <i>kho(e)</i>	‘person’
<i>-xu</i>	nominaliser	<i>xuu</i>	‘thing’
<i>-lũã</i>	diminutive	<i>lũã</i>	‘child’
<i>ndjoro</i>	behind, after	<i>ndjoro</i>	‘back’
<i>kx'ai</i>	front, before	<i>kx'ai</i>	‘face’
<i>lui</i>	only/alone	<i>lui</i>	‘one’

7.2 Grammaticalisation of Tjwao Verbal Morphosyntax

Like nouns, verbs serve as historical sources for a subset of grammatical morphemes in Tjwao. Except for **taa* ‘be thus’, all source items still exist as full verbs in Tjwao. Two particles, *kua* ‘IPFV’ and *hĩ.a* ‘FUT’, have grammaticalised with the so-called juncture morpheme, suggesting they derive from the first verb in a multiverbal predicate of the juncture-verb type (cf. 6.2.2). In the following sections, each grammaticalisation path is discussed individually.

7.2.1 *kua* (Imperfective)

The imperfective particle *kua* (cf. 6.3.1) is most likely derived from the verb *kũũ* ‘to go’ acting as first verb in a multiverb construction and thus requiring the juncture morpheme. The verb *kũũ* ‘to go’ still exists as a fully productive verb in Tjwao. During the grammaticalisation process, the original form *kũũ-a* (i.e., ‘to go-J’) was phonologically reduced to *kua*, including complete loss of the nasality feature. While most grammatical morphemes in Tjwao are monomoraic, the presence of the juncture renders *kua* bimoric.

A similar grammaticalisation of *kũũ-a* ‘to go-J’ > *kua* is attested in other related languages of the Kalahari Khoe branch. Analogous to Tjwao, the lexical source *kũũ* ‘to go’ is still used as a full verb in all languages. The contraction *kũũ-a* > *kua* proposed for Tjwao resembles what has been suggested for other Tshwa and Shua varieties (Vossen 2013, Fehn 2019), as well as for Kua/Glana and Glui (Vossen 2013, Collins and Chebanne 2016, Fehn 2019), for instance, examples (7.11 a-b, 7.12 and 7.13). The imperfective meaning is restricted to Tshwa varieties (ex. 7.11 a-b). As illustrated in example (7.12), in Kua/Glana and Glui, *kua* is used to denote progressive. In two Shua varieties, specifically, Danisi and Deti, it is used to denote the future tense (ex. 7.13).

(7.11) Imperfective

a. *Jubera ere kwa* ||*khoo*.

djube-ra *ʔe.re* ***kua*** *g|oo*.

ox-pl 3sg.C **IPFV** be.big

The oxen are big. Hichware (Dornan 1917: 72)

b. *Tcire kua kũũ*.

tcire *kua* *kũũ*
 1sg **IPFV** go

I am going. G|labak'e (Westphal 1961: recording; transcribed by Fehn p.c.)

(7.12) **Progressive**

a. *Abe kua ia.*

abe *kua* *ia*
 3M.sg **PROG** dance

He is dancing. Kua/G|lana (Collins and Chebanne 2016: 32)

(7.13) **Future**

a. *Kua g|lam-ku-e-be.*

kua *g|lam-ku-e-be*
FUT love-REC-PASS-NEG

People will not love each other. Shua-Danisi (Vossen 2013: 470)

According to Vossen (1997: 364), *kua* originated in Proto-Eastern Kalahari Khoe **kua*. Fehn (2019: 106) suggests that the grammatical marker developed divergent semantic profiles in Proto-Shua (FUTURE) and Proto-Tshwa (IMPERFECTIVE), while the G|lana cluster subsequently borrowed it from the neighbouring Tshwa to denote the imperfective category of PROGRESSIVE. According to Bybee *et al.* (1994: 141-4), one of the ways in which imperfective develops is via the grammaticalisation of progressive markers.

A large body of research has been done on the grammaticalisation of the verb 'to go (to)' into aspect markers in various languages of the world. Cross-linguistically, Bybee *et al.* (1994: 166-73) propose the following grammaticalisation path using evidence from different languages from different families: progressive/continuous > imperfective > general present > future. In this scenario, the most basic meaning (PROGRESSIVE) is retained in G|lana, while both Tshwa (IMPERFECTIVE) and Shua (FUTURE) display more advanced stages of grammaticalisation.

7.2.2 *hĩ.a* (Future)

The morpheme *hĩ.a* (cf. 6.3.2) developed from the verb *hĩũ* 'to do, to make'. The full verb *hĩũ* 'to do, to make' is still preserved in Tjwao. The lexical source *hĩũ* was used as first verb in a multiverb construction followed by the juncture morpheme *-a*. The reduction from a bimoraic

verb to a monomoraic morpheme, that is, *hĩ̃-a* > *hĩ̃.a* resembles what has been suggested above for the imperfective marker, *kua*. Although the second vowel of the lexical source is lost, the nasality feature is retained, for example, *hĩ̃*, contrary to *kua* above.

The grammaticalisation of the particle *hĩ̃.a* from the verb *hĩ̃ +a* (juncture) is also attested in other related varieties from the Tshwa and Shua clusters (cf. Vossen 2013, Fehn 2019). The verb *hĩ̃* is still preserved as a full verb throughout these subgroups, for example, Cirecire (Chebanne 2013), Kua (Vosen 2013) and Nata Shua (McGregor 2017). The construction scheme that prevails in Tjwao is also found in Tshwa and Shua, including the contraction *hĩ̃-a* > *hĩ̃.a*. In both Shua and Tshwa, the nasal feature of the high front vowel /i/ is preserved. A future particle *ha*, found in in Kua/Glana (cf. Collins and Chebanne 2016), may constitute a related grammaticalisation that underwent further phonological reduction, that is, a contraction *hĩ̃.a* > *ha* (ex. 7.15).

(7.14) *hĩ̃.a*

a. *Kua hĩ̃.a kũũ-o-e.*

<i>kua</i>	<i>hĩ̃.a</i>	<i>kũũ-o-e</i>
IPFV	FUT	go-LOC-PASS

One will go. Kua (Vossen 2013: 488)

b. *Tse ãã-ta tse ke hĩ̃.a k'ũũ-k'ũũ.*

<i>tse</i>	<i>ãã-ta</i>	<i>tse</i>	<i>ke</i>	<i>hĩ̃.a</i>	<i>k'ũũ-k'ũũ</i>
1pl	know-NEG	1pl.C	IPFV	FUT	live-live

We do not know how we are going to live. Shua (McGregor 2017: 869)

c. *Ekue ko hĩ̃.a lana-a.*

<i>e.kue</i>	<i>ko</i>	<i>hĩ̃.a</i>	<i>lʔan-a</i>
3pl.M	IPFV	FUT	build-TAM

They had built.' or 'they will settle. CireCire (Chebanne 2013: 171)

(7.15) *ha*

a. *Ce ha kua †ʔũũ.*

<i>ce</i>	<i>ha</i>	<i>kua</i>	†ʔũũ
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1sg FUT PROG eat

I will be eating. Kua/Glana (Collins and Chebanne 2016: 43)

The grammaticalisation of a verb ‘do’ to denote the future is common and has been documented in other language families. A parallel development is found in Yesani-Mayo, Yagaria and Bari (Bybee *et al.*, 1994: 252-253), Mamvu (Newman and Rice 2004: 352) and French (Dahl and Velupillai 2013: 67). According to Jäger (2007: 14), this grammaticalisation is remarkably consistent cross-linguistically (Ibid. 253).

7.2.3 *-hĩ*⁸⁹ (Past)

The verb *hĩ* ‘to do, to make’ discussed above is also the source of another grammatical morpheme, *-hĩ* (cf. 6.3.4.1). Analogous to the future suffix *-hĩ.a* (cf. 7.2.2), phonetic erosion results in the loss of the second vowel.

The past tense suffix *-hĩ* attested in Tjwao has cognates in other Kalahari Khoe languages. Vossen (1997: 363) reconstructs the past tense suffix *-hĩ* for Proto-Kalahari Khoe and suggests that it derives from the verb *hĩ* ‘to do, to make’, which still exists as a full verb throughout the family. Analogous to Tjwao, the grammatical suffix has one mora resulting from the loss of the second vowel. While in Tshwa varieties (Tcire-Tcire, Hiechware, Glabak’e, Tsua, Kua) the suffix serves as a general past tense marker (cf. Vossen 1997, 2013, Fehn 2019) example (7.16), its cognate forms in Caprivi Khwe and !Ani (cf. Vossen 1997, Heine 1999, Kilian-Hatz 2008, Fehn 2019) denote the remote past tense (ex. 7.17).

(7.16) General Past

a. *Tcire* *ʔe.ba boori-na-hĩ ma ʔe.m tcaa.xu ke ts’ãã.*

tcire *ʔe.ba* *boori-na-hĩ* *ma* *ʔe.m* *tcaa.xu*

1sg.NOM 3sg.M.ACC tell-J-PST COMP 3sg.M.GEN brother

ke *ts’ãã*

IPFV steal

I told him that his brother steals. Tcire-tcire (Fehn and Phiri 2017: 111)

⁸⁹ See Andrason and Phiri (2018) for a detailed analysis of this grammatical morpheme that is, various semantic functions including grammaticalisation paths.

b. *Ka tci kua thuu.ka ʔe.ra mĩũ-a-hĩ.*

<i>ka</i>	<i>tci</i>	<i>kua</i>	<i>thuu.ka</i>	<i>ʔe.ra</i>	<i>mĩũ-a-hĩ</i>
ANT	1sg.NOM	IPFV	yesterday	3pl.ACC	see-J-PST

I saw them yesterday. Hiechware (Dornan 1917: 72)

c. *Sa tcuu-kaxu-ru-hĩ*

<i>sa</i>	<i>tcuu-kaxu-ru-hĩ</i>
2sg.F	buy-CAUS-J-PST

You sold. Kua (Vossen 2013: 487)

(7.17) Remote Past

a. *Te-e-hĩ xaa dama-ku-tca, lam khoe-tca.*

<i>te-e-hĩ</i>	<i>xaa</i>	<i>dama-ku-tca,</i>	<i>lam</i>	<i>khoe-tca</i>
stay-II-PAST	DEM	brother-REC-3du.M	two	person-3du.M

‘Once upon a time there lived two brothers, two men. Khwe (Kilian-Hatz 2008: 105)

The grammaticalisation of the verb ‘do’ > past is cross-linguistically recurrent and has also been documented in languages such as Mano (Bybee *et al.* 1994: 64), Middle Egyptian (Claudi 1994: 223) and Supyire (Carlson 1994: 619).

7.2.4 The Suffix *-ha*

The suffix *-ha* (cf. 6.3.4.2) is derived from the verb *hãã* ‘to be there, to exist’, which is used as a full verb in the language. The verb *hãã* is reduced to *-ha* and the nasality feature is lost. The evidence presented in Chapter 6 (cf. 6.3.4.1) demonstrates that the grammatical morpheme *-ha* has broad semantic potential and can function as a perfect marker, experiential present perfect, definite past, stative and non-stative present.⁹⁰

The suffix *-hã* is widespread throughout the Khoe family. It is the only the TAM morpheme which can without doubt be reconstructed for Proto-Khoe (cf. Hagman 1977, Vossen 1997, Heine 1999, Kilian-Hatz 2008, Haacke 2013a, 2013b, 2014, Rapold 2014, du Plessis 2019, Fehn 2016, 2019). The lexical source *hãã* ‘to exist to be there’ is still present as a full verb or

⁹⁰ For a detailed discussion of the various functions of this suffix in Tjwao and development paths, see Andrason and Phiri (2018).

copula verb in all modern Khoe languages. Vossen (1997: 361) reconstructs the function of the suffix *-hã* as a *perfect* marker for Proto-Khoekhoe, and *past* or *imperfective* for Kalahari Khoe. Recent studies suggest that this morpheme's semantic profile can be narrowed down to that of a perfect marker, which, in some languages (e.g., Tjwao, Khwe, and Ts'ixa), has extended its scope to the marking of past tense (cf. Güldemann 2006, Fehn 2019). As in Tjwao, other Kalahari Khoe languages require the juncture morpheme to attach *-hã* to the verb stem. Although the nasality feature is completely lost in some languages (ex. 7.18), it is retained in Khwe (ex. 7.19) and occasionally in Ts'ixa (Fehn 2016: 147).

(7.18) **Perfect marker**

a. *Glae.tco-are tcoro-ro tcũũ-a-ha.*

glae.tco-are tcoro-ro tcũũ-a-ha

woman-pl blanket-pl buy-J-**PRF**

The women have bought blankets. Hiechware (Dornan 1917: 72)

b. *K'ao.tco mari tcoa.re ?e.ba ts'ãã-ma-na-ha ?e.be Bulawayo xuu.*

k'ao.tco mari tcoa.re ?e.ba ts'ãã-ma-na-ha

man money 3pl.C.NOM 3sg.M.ACC steal-BEN-J-**PRF**

?e.be Bulawayo xuu

3sg.M.NOM Bulawayo come.from

The man they stole money from comes from Bulawayo.

TcireTcire (Fehn and Phiri 2017: 111)

(7.19) **Past tense**

a. *Ngu a ti nɔm-ca yava-na-hã*

ngu a ti nɔm-ca yava-na-hã

House O 1sg build-VOL want-J-**PST**

I would like to build a house. or 'I liked to build a house.

Khwe (Kilian-Hatz 2008:130)

b. *Ti kũũ-na-hã.*

ti kũũ-na-hã

1sg go-J-**PST**

I went (some time ago).

The grammaticalisation of the verb or copula ‘be, to exist’ to perfect>past is also attested in Maninka (Spears 1972: 15-16), Godié (Marchese 1986: 63), Kongo (Heine and Reh 1984) 88) Basque, Tigre, Maithili, Danish, Mano and Buriat (cf. Bybee *et al.* 1994: 65-67). Bybee *et al.* (1994: 51) have identified cross-linguistic grammaticalisation pathways involving ‘be, to exist’ which show a remarkable regularity in the development of perfect⁹¹ and past tense markers.

7.2.5 The Discourse Reference Marker *ta*

The discourse reference marker *ta* can be traced back to the verb **taa* ‘do thus, be so’. Contrary to all the morphemes analysed thus far, *taa* no longer exists as a full verb in Tjwao. The available data suggests that *ta* functions as both a discourse reference marker (cf. 5.41) and a complementiser (ex. 7.20). When used as a complementiser, the grammatical morpheme *ta* mostly appears with *verba dicendi* (verb of speaking) and verbs of perception. The morpheme follows the main verb of the supplementary clause. When used as a discourse referential marker, it is combined with the anaphoric demonstrative *xa* (e.g., *xa.ta* > like that), referring to preceding discourse units. During the grammaticalisation process, *ta* has become phonetically reduced from its source, that is, **taa* ‘be thus, so’. Unlike a full verb, *ta* cannot combine with any tense-aspect markers.

(7.20) a. *ʔE.be ti.a boori-na-ha maa tire naro kwala-na-ma ta mii.*

<i>ʔe.be</i>	<i>ti.a</i>	<i>boori-na-ha</i>	<i>maa</i>	<i>tire</i>	<i>naro</i>	<i>kwala-na-ma</i>
3sg.M	1sg.O	tell-J-PRF	INTER	1sg	who	write-J-BEN
<i>ta</i>	<i>mii</i>					
COMP	say					

He told me who he wrote to.

Although absent in Tjwao, the original lexical source *taa* ‘do thus’ is preserved in Khwe and !Ani (cf. Heine and Kuteva 2002, Kilian-Hatz 2008). In the above-mentioned languages, *taa* behaves like a finite verb in combining with TAM-suffixes, including completive suffix *-xu* (ex. 7.21).

⁹¹ Perfect is referred to as anterior in Bybee *et al.* (1994).

(7.21) a. *Taa-xu-no cii lo-yi ti-hĩ.*

taa-xu-no *cii* *lo-yi* *ti-hĩ*
thus-COMP-if **go:to** **lie:down-PASS** **FREQ-PAST**

And then they used to go there and to sleep.... ‖Ani (Heine and Kuteva 2002: 137)

b. *Taa xam kx'ui*

taa *xam* *kx'ui*
thus **lion** **speak**

Thus, the lion says. Khwe (Heine and Kuteva 2002:273)

A grammaticalisation of the verb *taa* is also found in Khwe and Ts'ixa (cf. ex. 7.22a-b). Analogous to Tjwao, *ta* has two functions, that is, as a complementiser and as a discourse reference marker. The complementiser *ta* is phonetically reduced to one mora (ex. 7.22 a-b). Although in Ts'ixa the discourse reference marker *tha* features aspiration, it has been suggested that its original source is still the verb **taa*, with aspiration being the result of breathy vowel phonation in the proto language (Fehn pc.). Like *ta* in Tjwao, Ts'ixa *tha* may be combined with the anaphoric demonstrative (ex. 7.23).

(7.22) a. Khwe (Kilian-Hatz 2008: 347)

Xa-ma do-a-te xa-ma |ao a |'u-a-goe ta.

xa-ma *do-a-te* *xa-ma* *lao* *a* *'u-a-goe* *ta*
 DEM-3sg.M believe-i-PRES DEM-3sg.M buffalo O kill-I-FUT **COMP**

He thinks that he can kill a buffalo.

b. Ts'ixa (Fehn 2016: 261)

ʔAm-ku thi.ʔa na=lu gere ʔĩ tha hĩ ta.

ʔam-ku *thi.ʔa* *na=lu* *gere* *ʔĩ.tha* *hĩ* *ta*
 agree-RCPR DRM DEM.REF=pl.M FUT thus do **COMP**

[They] agreed that they would do thus [like discussed]

(7.23) a. Ts'ixa Fehn (2016: 98)

Na.tha ti ko g|ara-si no kari xuu ʔite.

na.tha *ti* *ko* *g|ara-si* *no* *kari* *xuu* *ʔite*

thus 1sg IPFV write-REFL when hard thing NEG
 When I call myself like that, it is not a hard thing (to understand).

The extension of a verb ‘do thus, be so’ to a complementiser is cross-linguistically common and has been studied in West African languages, for example, Idoma and Twi (Loyd 1993), as well as in Bantu languages, for example, Shona (Güldemann 2008). The widespread occurrence of this grammaticalisation pathway has been documented in Kuteva *et al.* (2019: 398-399).

7.2.6 The Completive Suffix *-xu*

The completive suffix *-xu* likely evolved from the verb *xuu* ‘to leave behind, to abandon, to let’. The verb *xuu* acts as the second verb in a multiverb construction as evidenced by the presence of the juncture morpheme. The verb *xuu* still appears as a full lexeme in Tjwao (ex. 7.24). During the grammaticalisation process, the bimoraic realisation has become monomoraic, for instance, *xuu* ‘to leave’ > *-xu* ‘completive’. The fully grammaticalised suffix *-xu* may be combined with its original source verb, as exemplified in example (7.24).

- (7.24) *Mbuta kua xue-a mpala xuu-a-xu.*
mbuta *kua* *xue-a* *mpala* *xuu-a-xu*
 hare IPFV run-CONJ impala **leave-J-COMPL**
 The hare outruns the impala.

The completive suffix *-xu* is attested throughout the Kalahari Khoe subgroup. Vossen (1997: 354, 2010: 53, there called “Terminativ-Itiv”), Kilian-Hatz (2008: 145), Visser (2013: 439), Rapold (2014: 172) and Fehn (2016: 170) identify the origin of the monomoraic suffix *-xu* in the lexical verb *xuu* which still exists as a full verb across the Kalahari branch. The suffix *-xu* requires a juncture morpheme when linking it to the main verb, betraying its verbal origin.

- (7.25) a. Khwe (Kilian-Hatz 2008: 145)
Tca a ti xuu-a-xu-a-ha.
tca *a* *ti* *xuu-a-xu-a-ha*
 2sg.M O 1sg leave-II-COMPL-II-PASTI
 I have left you already/forever.

b. Khwe (Heine and Kuteva 2002: 189)

Kx'o-ro-xu ʔe

kx'o-ro-xu *ʔe*

eat-meat-11-COMPL IMP

Finish eating.

c. Ts'ixa (Fehn 2016: 170)

Ti ka ʔao-dza ti gam-a-xu-na-ta.

ti *ka* *ʔao-dza* *ti* *gam-a-xu-na-ta*

1sg POSS money-pl.F 1sg throw-J-COMPL-J-PST1

I threw my money away.

The development of completive markers from a verb 'to leave' is attested cross-linguistically. Grammaticalisation paths analogous to Tjwao and the Khoe languages are found in Tamil (Lehmann 1989), Archaic Chinese and Early Modern Chinese *que* (Long *et al.* 2012), as well as in Korean (Rhee 1996, 2016c). This grammaticalisation is also richly documented in Kuteva *et al.* (2019: 253).

7.2.7 The Benefactive Suffix *-ma*

The benefactive/dative suffix *-ma* (cf. 6.4.1.1) evolved from the verb *maa* 'to distribute, offer, give out' acting as second verb in a multiverb construction and thus requiring the juncture morpheme. The original lexeme *maa* 'to give' is still used as a full verb in Tjwao and can be inflected. The grammatical suffix *-ma* is phonetically and morpho-syntactically more reduced than its lexical source.

A similar development of the verb *maa* 'to give' is also found in other Kalahari Khoe languages for example, Khwe (Kilian-Hatz 2008: 162), Ts'ixa (Fehn 2016: 161), Kua/Glana (Collins and Chebanne 2016: 67), some of which no longer retain the source item. Like in Tjwao, the juncture morpheme is required to link the suffix *-ma* to the main verb. Compared to the source form, *-ma* has undergone phonetic reduction and exhibits a monomoraic realisation across Kalahari Khoe. The suffix *-ma* consistently serves as a benefactive marker introducing a beneficiary (ex. 7.26).

(7.26) a. |Xaise: Shua group (Vossen 2010: 53)

||ʔan-a-*ma*

build-J-**BEN**

To build for.

b. Kua/Glana (Collins and Chebanne 2016: 27)

Abe kwa ||ʔaixa ||ha-ra-ma.

abe kwa ||ʔaixa ||ha-ra-ma

3.MSS PROG chief plough -J-**BEN**

He is ploughing for the chief.

c. Khwe (Kilian-Hatz 2008: 162)

Djao a ti tca a dja-ro-ma-te.

djao (a) ti tca a dja-ro-ma-a-te

work O 1sg 2sg.M O work-J(II)-**BEN**-J(I)-PRES

I work for you. (lit. I work the work for you.)

d. Ts'ixa (Fehn 2016: 161)

||ũã-n ko ||ũũ-na ʔa n||gai-a-ma.

||ũã-n ko ||ũũ-na ʔa n||gai-a-ma

child-pl.C:I IPFV parent-pl.C:II ACC sing-J-**BEN**

The children are singing for the parents.

The grammaticalisation of a verb ‘to give’ to a benefactive suffix is common cross-linguistically. Parallel developments are attested in West African and in other languages of different families (cf. Lord *et al.* 2002: 218-221, Kuteva *et al.* 2019: 192-194).

7.2.8 The Volition Suffix *-kaa*

The suffix *-kaa* is derived from the verb *kaa* ‘to want, to search’. The evidence indicates that *-kaa* expresses volition when used with a human or animate referent (ex. 7.27). The grammaticalised form *-kaa* retains the bimoraic profile of the source item, displaying no signs of phonological reduction. Unlike *-xu*, *-ma* and other TAM suffixes discussed above, the grammatical morpheme *-kaa* does not require the juncture morpheme to attach it to the verb stem.

- (7.27) |*Ũã-rera kua djii-ra ʔabo-kaa.*
lũã-rera kua djii-ra ʔabo-kaa
 child-pl IPFV tree-pl climb-VOL
 The children like climbing trees.

Use of the lexeme, *kaa* ‘want’, to express volition is also attested in !Ani (Heine 1999) and Ts’ixa (Fehn 2016). The lexical sources of the cognate lexemes are still used as full verbs in these languages. While Ts’ixa and Tjwao preserve the form of the source item, the suffix has undergone phonological reduction in !Ani, that is, *-ka*. Although in Tjwao the suffix *-kaa* is used solely to denote volition, it has two functions in Ts’ixa and !Ani: to express volition (ex. 7.28), and to express proximative, that is, to encode the notion of ‘be about to’ (especially with inanimate nouns) (ex. 7.29).

- (7.28) a. !Ani (Heine 1999: 21)
Tsa ka-ra-han se-ku-he oo-xa.
tsa ka- ra- han se-ku-he oo-xa
 2:M:sg VOL-J- PRF mary-REC-PASS tomorrow
 You want to marry (your lady) tomorrow.

- b. Ts’ixa (Fehn 2016: 174)
Ti ko k’oxu k’oo-kaa.
ti ko k’oxu k’oo-kaa
 1sg IPFV meat eat.meat-VOL
 I want to eat meat.

- (7.29) a. !Ani (Heine 1999: 21)
A-m yi-ma |q’ai-lxe ka-te.
a-m yi-ma |q’ai-lxe ka-te
 DEM-M-sg tree-M-sg fall-INT PROX-PRES
 That tree is about to fall.

- b. Ts’ixa (Fehn 2016: 174)

lAm=si ko ts'oa-kaa.

<i>lam=si</i>	<i>ko</i>	<i>ts'oa-kaa</i>
sun=sg.F:I	IPFV	exit- PROX

The sun is about to rise.

Typologically, it is common that a volition verb ‘want’ may evolve into a proximative marker via a stage where the meaning of ‘want’ is interpreted to mean ‘be about to’ (Heine 1994b, 1997d, Kuteva *et al.* 2019). A similar development pathway is attested in the Early Modern Chinese (Long *et al.* 2012), Modern Chinese (Long *et al.* 2012), Manda (Bernander 2017) and Ewe (Ameka 1990, Heine 1997d).

7.2.9 The Morpheme *kama*

The original lexical source of the morpheme *kama* – which is used as subordinator (7.30 a-b) and comparative marker of inequality in Tjwao (7.31a-b) – is not clear. It is possible that *kama* can be traced to the verb *kama* ‘to track, to follow’ which still exists as a full verb.

(7.30) Subordination marker (*kama*>after, since)

a. ?Aba kua ti kama whu.whu ta mii-se.

<i>?aba</i>	<i>kua</i>	<i>ti</i>	<i>kama</i>	<i>whu.whu</i>	<i>ta</i>	<i>mii-se</i>
dog	IPFV	1sg	after	ONO	COMPL	say-ADV

When (after, as soon as) the dog barked whu whu, I ran away.

b. *Ti Zimbabwe haa-ta kama ti kua xu.djoe tcii.*

<i>ti</i>	<i>Zimbabwe</i>	<i>haa</i>	<i>kama</i>	<i>ti</i>	<i>kua</i>	<i>xu.djoe</i>	<i>tcii</i>
1sg	GN	come	since	1sg	IPFV	before/yet	be.sick

Since I came to Zimbabwe, I have been sick.

(7.31) Comparative (*kama*>than)

a. *Vundla-be tsu.nye Msindo kama.*

<i>Vundla-be</i>	<i>tsu.nye</i>	<i>Msindo</i>	<i>kama</i>
PN-sg.M	small:COP	PN	than

Vundla is smaller than Msindo.

To the best of my understanding, use of the lexeme *kama* ‘track’ to a subordinator or comparative maker has not been documented in other closely related languages. This grammaticalisation only exists in Tjwao. Therefore, more data from other Kalahari Khoe languages would be needed to determine whether the development of a verb ‘track, follow’ into a subordinator or a comparative marker may be traced to a shared proto language.

The grammaticalisation of subordinating markers (after, since) from a verb ‘to track’ is cross-linguistically attested (cf. Kuteva *et al.* 2019: 440) and has been well documented by Haspelmath (1997b: 65–66) for Finnish, Russian, Bulgarian, Latvian, and Croatian.

Table 12 below provides a comprehensive list of particles, suffixes and clitics that can be shown to be derived from verbs.

Table 12: Verbal Lexical Sources and Grammatical Morphemes

Grammaticalised Form	Meaning	Source	Meaning
<i>kua</i>	imperfective	<i>kũũ</i> ‘go’+ <i>a</i> ‘juncture’	‘to go’
<i>hĩ.a</i>	future	<i>hĩĩ</i> + <i>a</i> ‘juncture’	‘to do’
<i>hĩ</i>	past	<i>hĩĩ</i>	‘to do’
<i>ha</i>	perfective	<i>hãã</i>	‘to exist’
<i>ta</i>	discourse referential marker, complementiser	* <i>taa</i>	‘be thus’
<i>xu</i>	completive	<i>xuu</i>	‘to leave’
<i>ma</i>	benefactive	<i>maa</i>	‘to give’
<i>kaa</i>	volition	<i>kaa</i>	‘want’
<i>kama</i>	since comparative	<i>kama</i>	‘track’

7.3 General Grammaticalisation Tendencies

In this section I present the generalisations regarding grammaticalisation tendencies in Tjwao. In my discussion of the development of nominal and verbal grammatical morphemes, I use four independent but interconnected mechanisms that are linked to grammaticalisation, namely, context extension, desemanticisation or semantic bleaching, decategorialisation or morphological reduction and erosion (cf. section 3.2.2).

The first grammaticalisation mechanism that applies to all the grammatical morphemes is context extension. This mechanism can be defined as “the rise of new grammatical meaning when linguistic expressions are extended to new contexts” (Heine and Narrog 2010: 405). For instance, the original semantic meaning of the lexeme *lui* is ‘one’. Through extension, the meaning of *lui* has expanded to include additional function, specifically, to cover the notion of ‘only’. Another example is the morpheme, *ta*, which is traced back to the verb **taa* ‘do thus, be so’. The morpheme has two additional semantic functions, that is, as a discourse referential marker and a complementiser.

Semantic bleaching is the second of the main mechanisms of grammaticalisation that operates in nominal and verbal morphemes. This process can be seen as a direct result of extension, that is, the use of a linguistic expression in a new context. For example, two nouns which have been grammaticalised to adpositions of location, that is, *ndjoro* ‘behind’, and *kx'ai* ‘in front of’, have lost their lexical semantic values referring to body parts: ‘back’ and ‘face’, respectively. This mechanism can also be illustrated with the verbs *hĩ* ‘to do, to make’ and *hãã* ‘to be there, to exist’ that have been stripped away of some of their precise content and reinterpreted as tense and aspect markers, for instance, *hĩ* > *hĩ* ‘past’ and *hãã* > *-ha* ‘perfective’.

Another mechanism inherent to grammaticalisation that can be seen in Tjwao is decategorialisation. This mechanism involves three different aspects. The first aspect is the loss of the ability to take on distinctions like case, gender, and number (e.g., nouns), and the option of inflection for tense, aspect, negation (e.g., verbs). For example, when the nominal lexical sources are used as full nouns, they can take plural markers (e.g., *tcoa-re* ‘person-**plural**’, *lũã-rera* ‘child-**plural**’, *xuu-ra* ‘thing-**plural**’). Analogous to the nouns, lexical sources of different verbal grammatical morphemes can also take on different tense and aspect suffixes, valency-changing morphemes, and negation (e.g., *xuu-a-ha* ‘leave-J-**perfective**’, *xuu-a-xu* ‘leave-J-**completive**’, *kũũ-a-hĩ* ‘go-J-**past**’, *kũũ-tam* ‘go-**negation**’). This ability declines when the

lexical sources become grammaticalised morphemes (e.g., *lũã* ‘diminutive suffix’, *-xu* ‘nominaliser suffix’, *-hĩ* ‘past tense marker’, and *kua* ‘imperfective marker’). A second aspect indicating that grammatical morphemes in Tjwao have undergone decategorialisation is their inability to take modifiers (cf. Heine and Narrog 2010). For example, nouns can be modified with demonstratives, possessives, numerals and quantifiers and adjectives (e.g., *lui lũã ʔe.ce ua.na* ‘She has only **one child.**’, *tire kua g|oo tcoa mũũ* ‘I see a **big person**’). In contrast, all the grammaticalised nominal grammatical morphemes discussed in this chapter cannot be modified (e.g., *tcoa.n* ‘first person plural’ and *lũã* ‘diminutive suffix’). A third aspect of decategorialisation that applies is “loss of independence as an autonomous form, increasing dependence on some other constituent” (Heine and Narrog 2010: 407). This is best illustrated by the morphemes *-xu* ‘nominaliser suffix’, *-tco* ‘agentive suffix’, *-ma* ‘benefactive’, *-xu* ‘completive’ *hĩ* ‘past’ and *ha* ‘perfective’ which have lost their ability to be used as independent nouns and verbs and are currently dependent on other lexemes, that is, they become suffixes to nominal and verbal bases.

Phonetic erosion can be shown through the reduction from bimoraic lexemes to monomoraic grammatical morphemes. In section 3.2.2, I described four different kinds of phonetic erosion, of which two are attested in the grammatical morphemes discussed in this chapter. The first type is the loss of phonetic segments, including loss of full syllables. This is best illustrated by the bimoraic lexemes *maa* ‘give’, *xuu* ‘leave’ and *xuu* ‘thing’ which have been reduced to monomoraic morphemes, for instance, *ma* ‘benefactive’, *xu* ‘completive’, *xu* ‘nominaliser’. The second type is phonetic simplification. For example, during the grammaticalisation of morphemes, nasalisation is lost on vowels, for instance, *hãã* ‘exist’ > *ha* ‘perfective’, *kũũ-a* ‘to go-J’ > *kua* > ‘imperfective’.

A summary of the four types of mechanisms that have operated during the grammaticalisation of respective morphemes in Tjwao is presented in the table below.

Table 13: Nominal and Verbal Grammatical Morphemes

Nominal Grammatical Morphemes	Grammaticalisation Mechanism			
	<i>Context Extension</i>	<i>Semantic Bleaching</i>	<i>Decatergorisation</i>	<i>Phonetic Erosion</i>

<i>tcoa.n</i>	yes	yes	yes	yes
<i>-tco</i>	yes	yes	yes	yes
<i>-xu</i>	yes	yes	yes	yes
<i>-lũã</i>	yes	yes	yes	no
<i>ndjoro</i>	yes	yes	yes	no
<i>kx'ai</i>	yes	yes	yes	no
<i>lui</i>	yes	yes	yes	no
Verbal Grammatical Morphemes				
<i>kua</i>	yes	yes	yes	yes
<i>hĩ.a</i>	yes	yes	yes	yes
<i>hĩ</i>	yes	yes	yes	yes
<i>ha</i>	yes	yes	yes	yes
<i>ta</i>	yes	yes	yes	yes
<i>-xu</i>	yes	yes	yes	yes
<i>-ma</i>	yes	yes	yes	yes
<i>kaa</i>	yes	yes	yes	no
<i>kama</i>	yes	yes	yes	no

Within grammaticalisation theory, it is generally assumed that the developmental direction is unidirectional, that is, from more content to more grammatical (cf. 3.2.2). The evidence provided in this dissertation demonstrates that the development of grammatical morphemes in Tjwao is unidirectional. For example, (*xuu* ‘thing’>*xu* ‘nominaliser suffix’, *xuu* ‘leave’ > *xu* ‘complementiser’, *hãã* ‘exist’>*ha* ‘perfective’, *ndjoro* ‘back’> *ndjoro* ‘behind’, and *kx'ai* ‘face’> *kx'ai* ‘in front of’). All of the above listed examples involve a shift from concrete meanings to abstract meanings, and the movement in Tjwao is from an open-class to a closed-class item.

7.4 Historical Findings

From a historical perspective, there are three kinds of grammaticalisation processes attested in Tjwao: (a) inherited from Proto-Khoe-Kwadi, Proto-Khoe, or Proto-Kalahari Khoe; (b) cross-linguistically or areally common; (c) uniquely found in Tjwao.

Grammaticalisations, which can be traced back to a proto language, most likely did not take place independently in different members of the family or subgroup, but are inherited from a shared ancestor, that is, Proto-Khoe-Kwadi, Proto-Khoe, or Proto-Kalahari Khoe. Only a single grammaticalisation, the agent noun suffix **-kho(e)*, can be traced all the way to the most remote common ancestor, Proto-Khoe-Kwadi. While this may in part be due to the very restricted amount of data available for the extinct Angolan language, Kwadi (Güldemann and Elderkin 2010), one may also speculate that grammaticalisation was one of the major instruments involved in the linguistic restructuring of the Khoe languages after their entry into the Kalahari Basin and extensive contact with peoples speaking Kx'a and Tuu languages (Güldemann 2008, Güldemann and Fehn 2017). Three of five grammaticalisation paths attested for the Proto-Khoe stage involve grammaticalisation of verbs in multiverb constructions. Multiverb constructions, in particular serial verb constructions, are a characteristic of the Kalahari Basin Area 'Sprachbund' and widely attested across Kx'a and Tuu. They may therefore constitute a contact-induced feature in Proto-Khoe which led to the grammaticalisation of verbal source items into postverbal affixes denoting completive (**-xu*), dative/benefactive (**-ma*), and perfect/current relevance (**-hã*). As postverbal markers of current relevance are also found in languages of the Kx'a and Tuu families (Güldemann and Fehn 2017), the grammaticalisation of *-hã* (< **hãã* 'be, to exist') may have been directly triggered by contact. While grammaticalised uses of deverbal affixes exist in both Khoekhoe and Kalahari Khoe, only Kalahari displays use of the juncture-morpheme to link them to the verb stem. In Khoekhoe, they are directly attached to the verb stem which displays a tonal operation known as 'flip-flop'. In Kalahari Khoe, flip-flop appears in combination with the juncture and may hint at loss of the morpheme in Khoekhoe, rather than an innovation in Kalahari Khoe (Rapold 2014). Apart from the diminutive suffix **-lũã* and the discourse reference marker **ta*, grammaticalisations at the Proto-Kalahari Khoe stage concern temporal and spatial relations: the body part terms, **kx'ai* 'face, front' and **n#uro* 'back', are used as subordination markers 'before' and 'after', as well as for the adverbial notions 'in front' and 'behind'.

While some of the grammaticalisations listed under "cross-linguistically common" may actually trace back to a common ancestor of two or more related dialect clusters within Kalahari Khoe, none of them is altogether supportive of an East-West split as postulated in Vossen (1997). While Tjwao shares no grammaticalisations with Naro and only a few with languages of the Glui-Glana group (Glui, Kua/Glana), the past tense **-hĩ*, the complementiser **-ta*, and

the volition marker **-kaa*, are also shared with languages of the Khwe cluster which, according to Vossen (1997), belong to the Western Kalahari Khoe subgroup. Furthermore, no unique sharing between Tjwao, Shua and Ts'ixa which would be in support of a genealogical unit, Eastern Kalahari Khoe, could be identified.

The only grammaticalisations found in the data which, with some certainty, can be ascribed to Tjwao-internal developments, are two grammaticalisations of the verb *kama* 'to track' (< **!ama*), as well as grammaticalisation of *tcoa* 'person' (< **kua*) to a pronoun of the first person plural.

To conclude the above discussion, the table below is a summary of the three kinds of grammaticalisation processes attested in Tjwao from a historical perspective.

Table 14: Grammaticalisation in Tjwao from a Historical Perspective

Grammatical morpheme	Meaning	Kwadi	Khoekhoe	Naro	G!ui	Kua	Khwe	Ts'ixa	Shua	Tjwao
PROTO KHOE-KWADI										
<i>-kho(e)</i>	nomina agentis	yes	yes	yes	yes	yes	yes	yes	yes	yes
Proto Khoe										
<i>-xu</i>	Nominaliser	no	yes	yes	yes	yes	yes	yes	yes	yes
<i>-xu</i>	Completive	no	yes	yes	yes	yes	yes	yes	yes	yes
<i>-ma</i>	Benefactive	no	yes	yes	yes	yes	yes	yes	yes	yes
<i>-hã</i>	perfect/current relevance	no	yes	yes	yes	yes	yes	yes	yes	yes
<i>lui</i>	'only, alone'	???	yes	yes	???	yes	yes	yes	yes	yes
PROTO KALAHARI KHOE										
<i>-lũã</i>	Diminutive	no	no	yes	yes	yes	yes	yes	yes	yes
<i>nɬuro</i>	'behind, after'	no	no	yes	yes	yes	yes	yes	yes	yes
<i>kx'ai</i>	'front, before'	no	no	yes	yes	yes	yes	yes	yes	yes
<i>ta</i>	discourse reference marker	no	no	yes	???	no	yes	yes	yes	yes
CROSS-LINGUISTICALLY COMMON, INDEPENDENT OCCURRENCES AND REGIONAL PATTERNS										
<i>-ka(a)</i>	Volition	(maybe)	no	no	no	no	yes (!lani)	yes	yes	yes

<i>-hĩ</i>	past tense	no	no	no	no	no	yes	no	no	yes
<i>hĩ</i>	Future	no	no	no	(maybe)	yes	no	no	yes (nata dialect)	yes
<i>kua</i> (< <i>kũũ-a</i>)	imperfective/progressive	no	no	no	yes	yes	no	(yes, kua=and)	(yes, kua=fut)	yes
<i>-ta</i>	complementiser	no	no	no	???	no	yes	yes	yes	yes
UNIQUELY IN TJWAO										
<i>kama</i>	Subordinator	no	no	no	no	no	no	no	no	yes
<i>kama</i>	Comparative	no	no	no	no	no	no	no	no	yes
<i>tcoa</i> (< <i>*kua</i>)	personal pronoun	no	no	no	no	no	no	no	no	yes

CHAPTER EIGHT: CONCLUSION

This chapter provides a summary of the thesis. It combines the key arguments on the grammaticalisation of the nominal and verbal morphemes in Tjwao that I have explored throughout this work, and also discusses possible starting points for future studies. Section 8.1 summarises the thesis, while section 8.2 highlights the limitations of the study. Section 8.3 suggests areas for future research.

8.1 Summary

Tjwao is the only remaining ‘Khoisan’ language of Zimbabwe and is poorly documented. This thesis went ahead to document important aspects of its sociolinguistic background, phonology, nominal and verbal morphosyntax. In Chapter One, I discussed the historical and sociolinguistic background of the Tjwao people. I presented the problem statement, objectives of the study and the research question.

In Chapter Two, I reviewed the existing literature in Khoe studies. I began the presentation by a discussion of literature on the Khoe family (Vossen 1997, 2013). I moved on to examine studies on the Khoekhoe branch (Wuras 1920, Engelbrecht 1928, Meinhof 1930, Beach 1938, Maingard 1962, Hagman 1977, Haacke 1976, 1999, 2013, Haacke and Eiseb 2002, du Plessis 2017). I presented a review of what has been published on the Kalahari Khoe subgroup (cf. Köhler 1981, Traill 1986, Güldemann 2001, Trail and Vossen 1997, Nakagawa 2006, Kilian-Hatz 2008, Fehn 2016). In addition, I studied the under-documented Eastern Kalahari Khoe branch of which Tjwao forms a part (cf. Vossen 1997, Chebanne 2014, Chebanne and Collins 2016, Fehn and Phiri 2017, Andrason and Phiri 2018, Andrason, Fehn and Phiri 2020, Chebanne and Mathes 2013). In so doing, I was able to identify the gaps in Tjwao scholarship. I further examined literature that analyses the nominal and verbal morphosyntax of Kalahari Khoe within the grammaticalisation framework (cf. Heine 1986, Elderkin 1986, Vossen 1998, 2010, Kilian-Hatz 2002, 2006, 2008, Rapold 2014).

In Chapter Three, I focused on data gathering techniques and the theoretical frameworks that I used to describe and analyse data. The opening part of the chapter examined the primary methods of data collection used in this study, that is, elicitation, interviews, non-participant observation, focus group discussions and data from existing sources. The second part of

Chapter Three focused on the two theoretical frameworks used in the present study. I first presented the framework of Basic Linguistic Theory, which is widely used in documenting languages that lack a systematic description, like Tjwao. I employed this theory in the description of evidence in chapters four, five and six. After discussing the Basic Linguistic Theory, I then examined the grammaticalisation framework which I used to analyse data in Chapter Seven. I presented a description of the four mechanisms of grammaticalisation, namely, context extension, semantic bleaching, decategorialisation and phonetic erosion. I discussed the unidirectionality hypothesis and described how it can be linked to the Theory of Grammaticalisation. Furthermore, I explained the concept of the grammaticalisation cline and explained how it is used as a heuristic tool.

With the data gathering techniques and the theoretical frameworks discussed, I proceeded to present my evidence. I drew the evidence from the data I collected during frequent field trips in 2017, 2018 and 2019 in Tsholotsho District that resulted in hours of audio recordings and a hundred of pages of field notes.

In Chapter Four, I began the presentation of the evidence by describing the Tjwao sound system. I examined five oral vowel monophthongs, nine oral vowel sequences, three nasal vowels and three nasal vowel sequences. In my description of consonant phonemes, I opted for an approach distinguishing non-click from click consonants (cf. Nakagawa 2006). I discussed 39 non-click consonant sounds looking at their place of articulation, manner of articulation and voicing. I then moved on to click sounds. I analysed two click influxes, that is, the dental and lateral clicks, and seven distinct accompaniments that may appear with them. I studied the changes in the consonant inventory (i.e., the loss of the alveolar and palatal click sounds and their replacement with non-click sounds). In my analysis of the phonotactic structure, I found that all the grammatical elements in Tjwao are monomoraic except for the imperfective marker, *kua*, which is bimoraic.

From the Tjwao sound system, I moved on to Chapter Five and discussed the nominal categories and their morphosyntax. First, I studied the structure of the noun-phrase and presented the respective elements that constitute it. I analysed personal pronoun use, which is characterised by inherent case distinctions. I also provided a discussion on plural marking. I observed that plural suffixes exhibit three case distinctions (i.e., nominative, accusative and genitive). Furthermore, I examined five nominal modifiers and three nominal derivations.

Overall, I observed that Tjwao: a) has a particular syntactic construction involving a noun followed by a co-referential pronoun, however, the use of the pronominal co-referent is not obligatory; b) does not display an inclusive/exclusive distinction in first person plural pronouns, as well as pronoun bases for the first and second person; c) does not allow for more than one modifier to precede the head noun; and d) relative clauses are a further type of nominal modifier.

In Chapter Six, I presented evidence on the verbal morphosyntax. I discussed transitivity value and identified six-word order patterns of intransitive, transitive, and ditransitive verbs: SV (subject-verb), SOV (subject-object-verb), OSV (object-subject-verb), SVO (subject-verb-object), S(IO)OV (subject-indirect object-object-verb) and OS(IO)V (object-subject-indirect object-verb). I discussed the so-called juncture morpheme. I identified seven juncture allomorphs in Tjwao. The most commonly occurring juncture allomorphs are zero and /a/. I further described two types of multiverb constructions: conjoined predicates with the conjunction *a*, and a type of construction in which multiple verbs are linked by the juncture morpheme. I examined the different types of TAM affixes and suffixes. I observed that there are two clausal slots for TAM markers, that is, one preverbal slot and one postverbal slot. I also described various valency-changing morphemes.

Having described the various pieces of evidence in Chapter Five and Six, in Chapter Seven, I answered the primary research question of the study: *what are the lexical origins of the different grammatical morphemes that are observed in Tjwao nominal and verbal morpho-syntax?* I used the grammaticalisation theory as a tool of analysis to demonstrate that most grammatical morphemes in Tjwao have historically developed from lexical nouns and verbs.

Firstly, I discussed the grammaticalisation of seven nouns which have developed into adpositions of location, agentive suffix, nominaliser suffix, diminutive morpheme, and restrictive focus particle. Secondly, I studied the development of nine verbs which have grammaticalised into TAM suffixes, discourse referential marker, complementiser, benefactive and volition. In addition, Tjwao was shown to have a unique grammatical morpheme that has not been documented for other Kalahari Khoe languages. This morpheme has two functions, that is, as a subordinator and as a comparative marker. Having demonstrated the lexical origins

of different grammatical morphemes, I then moved on to formulate generalisations for my study.

To back up my analysis and claims for Tjwao, I used supplementary data from other related languages of the Kalahari Khoe branch, namely, Ts'ixa, Khwe, Kua-Gllana, Glui, Cirecire, Gllabak'e, lAni, Naro, Danisi, Kua and Hiechware. In addition, I employed evidence from other languages of the world from different families. It was shown that, analogous to Tjwao, nouns and verbs are the most common lexical sources of grammatical morphemes in all Kalahari Khoe languages used for comparison. In addition, I demonstrated that most lexical sources and grammatical morphemes attested in Tjwao have cognates in closely related languages. My application of the Grammaticalisation Theory in the analysis of nominal and verbal morphosyntax showed that Tjwao conforms to the grammaticalisation tendencies exhibited by other related languages of the Kalahari Khoe branch.

From a historical perspective I observed that there are three kinds of grammaticalisation processes that occur in Tjwao: a) inherited, that is, from the Proto-Khoe-Kwadi or Proto-Kalahari Khoe; b) found in multiple languages and cross-linguistically common; and c) unique, that is, the ones that happen only in Tjwao.

Overall, the contribution of this study is twofold. In addition to documenting Tjwao nominal and verbal morphosyntax using this theoretical approach, the study also made a typological contribution by showing that the Grammaticalisation Theory is a viable analytical tool in understanding and accounting for nominal and verbal morphosyntax in Tjwao and related languages of the Kalahari Khoe branch. It thus provides evidence in favour of the Grammaticalisation Theory as a tool of analysis.

8.2 Limitations of the Study

Like any academic study, this dissertation has its limitations. Firstly, the Tjwao corpus that I compiled was relatively small in comparison to the big corpora such as the corpora for Ts'ixa, Glui, Naro and Khwe. During fieldwork, I collected 750 words and approximately 1000 sentences. A big Tjwao corpus could not be achieved due to various factors, including the small number of speakers and absence of use in everyday contexts, the political situation in Zimbabwe and the outbreak of a global pandemic. In addition, I could not visit all the areas

where the Tjwao people are found, including areas of Botswana close to the Zimbabwean border. Secondly, this being the first academic study to cover various aspects of Tjwao, it could not satisfactorily resolve all the crucial issues relating to the phenomena described in this thesis. For example, I did not study the tonal system of Tjwao.

8.3 Areas of Future Research

Below I identify the areas that may merit further attention:

- a. There is need to study the language's tonology. This will contribute to getting a fuller picture of the entire grammaticalisation process. When describing the mechanisms of grammaticalisation, Heine and Kuteva (2007) rightfully point out that phonetic erosion also includes the loss of suprasegmental properties, such as tone.
- b. The study also recommends a further investigation of the development of the grammatical marker, *kama*, and its lexical source.

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APPENDIX I

Swadesh Tjwao word list

<i>Gloss</i>	<i>Speaker 1</i>	<i>Speaker 2</i>	<i>Speaker 3</i>	<i>Speaker 4</i>	<i>Speaker 5</i>
all	(tcoa) ?ii.ye	?ii-ra~?ii-re (pl.)	?ii.ye	(ka) ?ii.ye	?ii-ra (pl)
ash(es)	tsoa	dzoa	dzoa	tsoa	tsoa
bark	djore	djore	djore	djii-tcoro (‘tree- medicine’)	djore
belly	laa	laa	laa	laa	laa
big	gloo	gloo	gloo	gloo	gloo
bird	dzira	dzira	dzira-lũã	dzira-lũã	dzira
bite	paa	paa	paa	paa	paa
black	ndjuu	ndjuu	ntsuu	ndjuu	ndjuu
blood	taka	taka	taaka	taaka	taaka
bone	l?ũã	l?ũã	l?ũã	l?ũã	l?ũã
breast	sam	sam	sam	sam	sam-ra (pl)
burn (vt)	dao	dao	dao	dao	tsãã-kua
burn (vi)	tsãã	ŋaa	papa	xoo.xa	ŋaa
claw/nail	lxore	lxore	lxore	lxore	lxore~lhore
cloud	lum	lum	lum	lum	lum
cold	lxuru~lhuru	lxuru~lhuru	lxuru~lhuru	lxuru	lxuru
come	haa	haa	haa	haa	haa
die	l?oo	l?oo	l?oo	l?oo	l?oo
dog	?aba	?aba	?aba	?aba	?aba
drink	kx’aa	kx’aa	kx’aa	kx’aa	kx’aa
dry (adj)	lxoo-ha	lxoo-ha	lxoo-ha	lxoo-ha	lxoo-ha
ear	tcee	tcee	tcee	tcee	tcee
earth	ŋuu	ŋuu	nũũ	ŋũũ	ŋuu
eat (gen.)	?nyũ	?nyũũ	?nyũũ	?nyũũ~?yũũ	?yũũ
eat (meat)	kx’oo	?nyũũ	?nyũũ	?nyũũ	n/a
egg	?ibi	?ibi	?ibi	?ibi	?ibi
eye	tcxai	tcxai	tcxai	tcxai	tcxai
fat	nlgui	nlgui	nlgui	glui	nlgui
feather	l?ũũ	l?ũũ	l?ũũ	l?ũũ	l?ũũ
fire	l?ee	l?ee	l?ee	l?ee	l?ee
fish	?au	?au	?au	?au	?au
fly (v)	n/a	labu	dzaro	tan	l?ũũ a, tan
foot	kare	kare	kare	karee	karee
full	l’oe-ha	l’oe-ha	l?oe-ha	l’oe-ha	l’oe-ha
give	maa	maa	maa	maa	maa
good	t’ũĩ	t’ũĩ	t’ũĩ	t’ũĩ	t’ũĩ
green	ts’abe	n/a	kx’oa-ra (pl)	n/a	loa
hair	l?ũũ	l?ũũ	l?ũũ	l?ũũ	l?ũũ
hand	tshau	tshau	tshau	tshau	tshau
head	maa	maa	maa	maa	maa

hear	lam	lam	lam	lam	lam
heart	tsoo	tsoo	tsoo	tsoo	tsoo
horn	nlaã	nlaã	nlaã	nlaã	nlaã
I (1sg)	ti(-a)	ti(-a)	ti(-a)	ti(-a)	ti(-a)
kill	lx'ũũ	lx'ũũ	lx'ũũ	lx'ũũ	lx'ũũ
knee	loe	loe	loe	loe	loe
know	?ana-ha (>?ãã)	?ãã	?ana-ha (>?ãã)	?ana-ha (>?ãã)	?ana-ha (>?ãã)
leaf	g ana	g ana	g ana	g ana	g ana
lie (down)	loe	loe	loe	loe	loe
liver	kx'ĩĩ	kx'ĩĩ	kx'ĩĩ	kx'ĩĩ	kx'ĩĩ
long	kao	kao	kao	kao	kao
louse	kx'uni	kx'uni	kx'uni	kx'uni	kx'uni
man	kx'ao-tco	kx'ao-tco	kx'ao-tco	kx'aa.xo	kx'ao-tco
many	lxara	lxara~lhara	lxara~lhara	lxara	lxara~lhara
meat	kx'oo.xo	kx'oo.xo	kx'oo.xo	kx'oo.xo	kx'oo.xu
moon	n goe	n goe	n goe	g oe	n goe
mountain	karo-ra(pl)	karo	karo, gae	gai, karo	gae~gai
mouth	kx'am	kx'am	kx'am	kx'am	kx'am
name	l?un	l?un	l?un	lx'un	l?un
neck	kx'au	kx'ao	kx'ao	kx'ao	kx'ao
new	l?aa	l?aa	l?aa	l?aa	l?aa
night	xae	xae	xae	xae	xae
nose	tsui	tsui	tsui	tsui	tsui
not (IPFV)	-tam	-ta	-ta	-ta	-ta
one	lui	lui	lui	lui	lui
person	tcoa	tcoa	tcoa	tcoa	tcoa
rain	tuu	tuu	tuu	tuu	tuu
red	loa~lqoa	loa	loa	loa~lqoa	loa
road	dao	pata, dao	pata, dao	dao	pata, dao
root	kx'ari	kx'ari	kx'ari	kx'ari	kx'ari
round	n/a	n/a	lui-xua, hãã=xu	lui-xa, hãã=xu	n/a
sand	n gara, xum ('soil')	n gara, xum ('soil')	n gara, xum ('soil')	n gara, xum ('soil')	n gara, xum ('soil')
say	mii	mii kx'ui ('talk')	mĩĩ	mii kx'ui ('talk') boori ('tell')	mii
see	mũũ	mũũ	mũũ	mũũ	mũũ
seed	lxuri	lxuri	lxuri	lxuri	lxuri
sit	nyũũ	nyũũ	nũũ	nũũ	nuu
skin	tcoo	tcoo	tcoo	tcoo	tcoo
sleep	loe, l?um (‘fall asleep’)	l?um	loe, l?um (‘fall asleep’)	loe, l?um (‘fall asleep’)	loe, l?um (‘fall asleep’)
small	tsũĩ	tsũĩ	tsũĩ	tsũĩ	tsũĩ
smoke	ts'ini	ts'ini	ts'ini	ts'ini	ts'ini
stand	tan, tee	tan	tee.na, tan	tee	tan-a tee
star	lxani	lxani	lxani.sa	lxani.sa	lxani.xa
stone	karo-lũã	karo	karo	karo	karo

sun	dzini	dzini	dzini	dzini	dzini
swim	lʔaa	lx'aa-hĩ	lx'aa-hi	lx'aa-hi	lʔaa-hi
tail	tsao	tsao	tsao	tsao	tsao
that	uu	uu	uu	uu	uu
this	ii	ii	ii	ii	ii
tongue	dam	dam	dam	dam	dam
tooth	lũũ	lũũ	lũũ	lũũ	lũũ
tree	djii-ra (pl)	djii	djii	djii	djii
two	lam	lam	lam	lam	lam
walk (go)	kũũ	kũũ	kũũ	kũũ	kũũ
warm	tsãã	tsãã	tsãã	tsãã	tsãã
water	tshaa	tshaa	tshaa	tshaa	tshaa
we	tcoa-n	n/a	ka	ta.kua	tcoa-n ʔii-re
what	nao	nao	nao	nao	nao
white	tsoa	xue	xue	xue	xue
who	nare	nare	nare	nare	nare
woman	glee.xo	glee.xo	glee-tco	glee-tco	glee.xo
you (2sg M, F)	tca, ca	tca, ca	tca, ca	tca, ca	tca, ca

APPENDIX II

Morphology and Syntax

In addition to the sentences used in the thesis, these are the additional examples of other linguistic aspects that were not discussed in this study.

Existential and Copula

Mari ʔe hãã.

mari ʔe hãã
money 3sg.C **exist**

There is money.

Gee-re hãã.

gee-re hãã
cow-pl **exist**

There are cows.

lũã-rera djii-dum o hãã.

lũã-rera djii-dum o hãã
child-pl forest LOC **COP**

The children are in the forest.

ʔEbe ndjuu a hãã.

ʔebe ndjuu a hãã
3sg house LOC **COP**

He is in the house.

ʔe

Ne ca ʔe.

Ne ca ʔe
DEM 2sg.F **COP**

It is you (f).

Ne tcoa.n ʔe.

Ne tcoa.n ʔe
DEM 1pl.C COP

It is us (M &F).

Ne ti baa ʔe.

Ne ti baa ʔe
DEM 1sg.POSS father COP

It is my father.

Negation

Tcoa-re xa.xua ham.

tcoa-re xa.xua ham
person-pl there NEG

There are no people.

Tuu.ʔa.ka ka ʔee habee.

tuu.ʔa.ka ka ʔee habee
long.ago ANT fire be.absent

Long ago there was no fire.

Tci k'ui-a kũũ tii, tci tcee.tcee ʔa kũũ.

tci k'ui-a kũũ tii, tci tcee.tcee ʔa kũũ
2sg.M talk-J go NEG 2sg.M listen and go

Do not walk talking, walk and listen!

Tci karo-ra gam-a-xu tii, karo-ra kua tcoa ʔũũ.

tci karo-ra gam-a-xu tii, karo-ra kua
2sg.M.GEN stone-pl throw-J-COMPL IMP.NEG stone-pl IPFV

tcoa ʔũũ

person kill

Do not throw the stones, the stones could kill someone.

Adverbialiser

[-se]

*ii kx'aro kua kobo-se kũũ.**ii k'aro kua kobo-se kũũ.*

DEM boy IPFV slow-ADVZ go

The boy is walking slowly.

*ii lũã kua t'ũĩ-se hĩ.**ii lũã kua t'ũĩ-se hĩ.*

DEM child IPFV good-ADVZ do

The child is doing well.

Intensifier

[kari-se=very]

*Ii k'aro kua kari-se xue.**ii k'aro kua kari-se xue*

DEM boy IPFV INTENS run

This boy is running fast.

*Ii karo kari-se kum e.**ii karo kari-se kum ʔe*

DEM stone INTENS hard it.is

This stone is very hard.

The morpheme ka**ka 'oblique'***Vundla-m ka cadza ʔnyũũ-e-ha.**Vundla-m ka cadza ʔnyũũ-e-ha*

PN-sg.M OBL porridge eat-PAS-PRF

The sadza was eaten by Vundla.

ʔAma tshaa ka |'oe-ha.

ʔama tshaa ka |'oe-ha
 pot water **OBL** full:J-PRF
 The pot is full of water.

ka ‘instrument’

Kao-tco-re kua lxao ka kae.tca.
kao-tco-re kua lxao ka kae.tca
 male-person-PL IPFV spear **INST** hunt
 The men are hunting with spears.

ʔE.m tcii ndzoro.ʔa ʔe.m tcxai-re ka mĩũ-ta.
ʔe.m tcii ndzoro.ʔa ʔe.m tcxai-re ka mĩũ-ta
 3sg.M be.sick after 3sg.M eye-pl **INST** see-NEG.IPFV
 After he was sick, he could not see with the eyes.

Kaxu ka ʔe.be kua ʔnyũũ.
kaxu ka ʔe.be kua ʔnyũũ
 knife **INST** 3sg.M IPFV eat
 He is eating with a knife.

Comitative

tcum ‘with’

Tire ka ngwana lĩã-re tcum kũũ-ha.
Tire ka ngwana lĩã-re tcum kũũ-ha
 1sg ANT three child-pl **with** go-PRF
 I went with my three children.

|Ũã-re-ra kua maare tcum tsãã-xo.
lĩã -rera kwa maare tcum tsãã-xo
 child-pl IPFV grandmother **with** cook
 The children are cooking with the grandmother.

Locative***a* ‘in, at’**

Ti kua tsũĩ ndjuu a nyũũ.

ti kua tsũĩ ndjuu a nyũũ

1sg IPFV small house **LOC** live

I live in a small house.

ʔE.tsara kua ndjuu a kx'ui.

ʔe.tsara kua ndjuu a kx'ui

3du.M IPFV house **LOC** speak

They are chatting (speaking) at the house.

Comparative constructions***tcoa* ‘be like’**

ʔAba tcoa ʔe.be kua xue.

ʔaba tcoa ʔe.be kua xue

dog **be.like** 3sg.M IPFV run

He is running like a dog.

ʔũã tcoa ʔe.be kua ʔyũũ.

ʔũã tcoa ʔe.be kua ʔyũũ

child **be.like** 3sg.M IPFV eat

He eats like a child.

***kama* ‘than, compared with’**

Ii.tshee kua kari.se tsãã ʔui.ka kama.

ii.tshee kua kari.se tsãã ʔui.ka kama

DEM.day IPFV INTENS hot yesterday **than**

Today is hotter than yesterday.

Vundla-be tsu.nye Msindo kama.

Vundla-be tsu.nye Msindo kama

PN-sg.M small:COP PN **than**

Vundla is smaller than Msindo.

Clause Linkage: Coordination and Subordination

(a) Coordination

Conjunction

ʔa ‘and’

ʔAba kua huku tcui ʔa ʔe xoo.

<i>ʔaba</i>	<i>kua</i>	<i>huku</i>	<i>tcui</i>	<i>ʔa</i>	<i>ʔe</i>	<i>xoo</i>
dog	IPFV	chicken	chase	and	it	hold

The dog chases the chicken and catches it.

Cori see ʔa tsxum-a-ha.

<i>cori</i>	<i>see</i>	<i>ʔa</i>	<i>tsxum-a-ha</i>
tobacco	take	and	hide-J-PRF

Take the cigarette and hide it.

Sequence

ʔa.xua.xua ‘and then’

Xam ʔe.ba tcui ʔa.xua.xua ʔe.be ||ʔoo-hĩ.

<i>xam</i>	<i>ʔe.ba</i>	<i>tcui</i>	<i>ʔa.xua.xua</i>	<i>ʔe.be</i>	<i> ʔoo-hĩ</i>
lion	3sg.M.O	chase	and.then	3sg.M	die:J-PST

The lion chased him and then he died.

Tcoa ka ʔii.ye kx'oo.xo ʔnyũũ ʔa.xua.xua tshaa kx'aa.

<i>tcoa</i>	<i>ka</i>	<i>ʔii.ye</i>	<i>k'oo.xo</i>	<i>ʔnyũũ</i>	<i>ʔa.xua.xua</i>	<i>tshaa</i>	<i>kxaa</i>
person	ANT	all	meat	eat	and.then	water	drink

Someone ate all the meat and then drank water.

Disjunction

ʔi.tshee ‘or’

Kx'aro-are kua ʔnyũũ ʔi.tshee ʔe.ku kua dzo.tsuri.

<i>kx'aro-are</i>	<i>kua</i>	<i>ʔnyũũ</i>	<i>ʔi.tshee</i>	<i>ʔe.ku</i>	<i>kua</i>	<i>dzo.tsuri</i>
boy-pl	IPFV	eat	or	3pl.M	IPFV	play

Are the boys eating or playing?

Dana.tco-re kua tsãã.xu ʔi.tshee tshaa kx'ue.

dana.tco-re kua tsãã.xu ʔi.tshee tshaa kx'ue
 girl-pl IPFV cook **or** water scoop

Are the girls cooking or fetching water?

(b) Subordination

Complement clauses

ta (complementiser)

Tcoa.re ʔe.kua nyũũ ʔe ʔae Garia ta kua tcii-e.

tcoa.re ʔe.kua nyũũ ʔe ʔae Garia ta kua tcii-e
 people 3pl.m stay 3sg.c village GN **COMP** IPFV call-PAS

The village where they are staying is called Garia.

Ndlovu ma tci tsee.xu kx'ui ta mii-a-hĩ.

Ndlovu ma tci tsee.xu kx'ui ta mii-a-hĩ
 personal.name QUOT 2sg.M.GEN truth speak **COMP** say-J-PST

Ndlovu said you must speak the truth.

Manner

nata 'how to'

Maare kua lĩã ng||a.ng||a shadza kua nata tsãã.xu e.

maare kua lĩã ng||a.ng||a shadza kua nata tsãã.xu e
 woman IPFV child show porridge IPFV **how** cook PAS

The woman shows the girl how porridge is cooked.

Ti kua boori maa shadza kua nata tsãã.xu e.

ti kua boori maa shadza kua nata tsãã.xu e
 1sg IPFV tell INTER porridge IPFV **how** cook PAS

I teach the way how porridge is cooked.

Indirect speech

ʔE.be ti.a ʔyoa ma maare ka manu a hãã.

ʔe.be ti.a ʔyoa ma maare ka manu
 3sg.M.NOM 1sg.ACC ask QUOT my.mother ANT where
a hãã
 LOC be.there

He asked me where my mother was.

Temporal and conditional clauses

kika ‘if’

Ti mota wana kika ti kua.nya Tsholotsho.

Ti mota ua.na kika ti kua.nya Tsholotsho o kũũ
 1sg car have **if** 1sg FUT GN LOC go

If I have car, I will go to Tsholotsho.

Tuu tuu-a-ha kika ti kua.nya ndjuu a nyũũ

tuu tuu-a-ha kika ti kua.nya ndjuu a nyũũ
 rain rain-J-PRF **if** 1sg FUT house OBL stay

If it rains, I will stay in the house.

Ti xam tcum ‖'are dika tire ka xam |'ũũ-a-ha.

ti xam tcum ‖'are kika tire ka xam |'ũũ-a-ha
 1sg lion with meet:J **if** 1sg ANT lion kill-J-PRF

If I had met a lion, I would have killed the lion.

Xa djii ka ti dao-xu-ta kika ka ʔe nlee tsii-a-ha.

xa djii ka ti dao-xu-ta kika ka ʔe nlee tsii-a-ha
 DEM tree ANT 1sg burn:J-COMP-NEG **if** ANT it now grow-J-PRF

If that tree had not burnt down, it would have grown big now.

xo.djoe ‘still’ + NEG = ‘not yet’ = ‘before’

Dzini xo.djoe ts'oa-ta-se tsabe kũũ-a-hĩ.

dzini xo.djoe ts'oa-ta-se tsabe kũũ-a-hĩ
 sun still exit-NEG-ADVZ 1du.M go-J-PST

Before the sun rose, we went out.

Tcoa.n ʔae kua ʔnyũũ kwelo xo.djoe kũũ-ta-se.

tcoa.n ʔae kua ʔnyũũ kwelo xo.djoe kũũ-ta-se
 1pl.C home IPFV eat school still go-NEG-ADVZ

Before we go to school, we eat at home.

kama ‘since’

ʔE.ce Tsholotsho sii-a-ta kama ʔe.ce kua tcii-kua-se tsui.na.

ʔe.ce Tsholotsho sii-a-ha kama ʔe.ce kua tcii-kua-se tsui.na
 3sg.F GN arrive-J-PRF **since** 3sg.F IPFV sick-IPFV-ADVZ be.sitting

Ever since she came to Tsholotsho she has been ill.

ii.xua ʔe.ci sii-a-ta kama ʔe.ce k’ui-ta.

ii.xua ʔe.ci sii-a-ha kama ʔe.ce k’ui-ta
 here 3sg.F arrive-J-PRF **since** 3sg.F speak-NEG

Ever since she came here, she has been quiet.

xo.djoe ‘while, concurrently’

ʔe.kua ka xo.djoe kari-se zuu ua.na ʔe.kua kua kũũ-se.

ʔe.kua ka xo.djoe kari-se zuu ua.na
 3pl.M ANT **while** INTENS conversation have

ʔe.kua kua kũũ-se.
 3pl.M IPFV go-ADV

They talked a lot while they were going.

ʔE.ce kua xo.djoe tcii-se, ʔe.ce kua kari-se loe.

ʔe.ce kua xo.djoe tcii-se, ʔe.ce kua kari-se loe
 3sg.F IPFV **while** sick-ADV 3sg.F IPFV INTENS sleep

While she was sick, she slept lot.

ndzoro.a ‘after’

ʔNyũũ ndzoro.a tcoa.re kua.nya cingo kũũ.

ʔnyũũ ndzoro.a tcoa.re kua.nya cinga o kũũ

eat after 1pl.C FUT work LOC go

After eating, we will go to work.

lx'aa-hĩ ndzoro.a dara.tco-ra kua.nya haa.

lx'aa-hĩ ndzoro.a dara.tco-ra kua.nya haa
wash-REFL after visitor-pl FUT come

After bathing, the visitors will come.

ma 'until'

Ti kua.nya ʔe.kua ʔe nyũũ-na-ma, ʔe.kua kua.nya sii.

ti kua.nya ʔe.kua nyũũ ma ʔe.kua kua.nya sii
1sg FUT 3pl.M stay until 3pl.M FUT arrive

I will wait for them until they come.

Ti kua.nya ʔe.kua ʔe lx'am ma ʔe.ku kua.nya ʔam

ti kua.nya ʔe.kua lx'am ma ʔe.ku kua.nya ʔam
1sg FUT 3pl.M beat until 3pl.C FUT agree

I will beat them until they agree.

Causal clauses

ʔa.ka 'because'

Dana.tco t'ũĩ.nye nlee ʔa.ka tsii-a-ha.

dana.tco t'ũĩ.nye nlee ʔa.ka tsii-a-ha
girl pretty:COP ?now because grow.up-J-PRF

Now the girl is beautiful because she is growing up.

Tire kx'oo.xo ʔnyũũ-ta ʔa.ka ts'oro-ha.

tire kx'oo.xo ʔnyũũ-ta ʔa.ka ts'oro-ha
1sg meat eat-NEG because rot:J-PRF

I do not eat the meat because it is rotten.

Adversative clauses

ʔa.ka 'but'

Dube |*xao* |*ʔaa* *ʔe*, *ʔa.ka* *Vundla-m* *de* *nglao-ha*.

Dube |*xao* |*ʔaa* *ʔe*, ***ʔa.ka*** *Vundla-m* *de* *nglao-ha*
 PN spear new COP **but** PN-sg.M POSS old:J-PRF

Dube's spear is new, but Vundla's is old.

Questions

ʔe

Ti djibe tca ka mũũ e?

ti *djibe* *tca* *kua* *mũũ* *e*
 1sg axe 2sg.M IPFV see **Q**

Do you see my axe?

Tca kaa-ta ʔexa |ii?

tca *kaa-ta* *e* *xa* *|ii*
 2sg.M like-IPFV.NEG **Q** DEM song

Don't you like this song?

nao 'what'

Nao kua hĩ-hĩ?

nao *kua* *hĩ-hĩ*
what IPFV do-REFL

What is happening?

Ti ʔnyũũ ʔnyũũ-a-ha kika nao kua.nya hĩ-hĩ?

ti *ʔnyũũ* *ʔnyũũ-a-ha* *kika* ***nao*** *kua.nya* *hĩ-hĩ*
 1sg food eat-J-PRF if **what** FUT do-REFL

What will happen if I eat the food?

nare 'who'

Nare k'oo.xo ʔnyũũ-a-ha?

nare k'oo.xo ʔnyũũ-a-ha

who meat eat-J-PRF

Who ate the meat?

Nare Vundla-ba tcii-a-ha?

nare Vundla-ba tcii-a-ha

who PN-sg.M.O call-J-PRF

Who called Vundla?

manu ‘where’

!Ũã kua ka kx'ee: Maare manu a hãã?

ũã kua ka kx'ee: Maare **manu** a hãã

child IPFV ANT cry my.mother **where** LOC be.there

The child was crying: “Mother, where are you?”

Xa glee.tco manu kũũ-a-ha?

Xa glee.tco **manu** kũũ-a-ha

DEM woman **where** go-J-PRF

Where did that woman go?

nama ‘which’

Nama yembe tca kua ʔani-kaa?

nama yembe tca kua ʔani-kaa

which shirt 2sg.M IPFV wear-VOL

Which shirt would you like to wear?

Ca kua nama g|ãã-kaa?

ca kua **nama** g|ãã-kaa

2sg.F IPFV **which** try-VOL

Which (dress) do you want to try?

Information structure (Focus, Theme)

Vundla-be kua tshau ka ʔnyũũ.

Vundla-be kua tshau ka ?nyũũ

PN-sg.M IPFV hand with eat

Vundla is eating with his hand.

Vundla-be kua tshau ka cadza ?nyũũ

Vundla-be kua tshau ka cadza ?nyũũ

PN-sg.M IPFV hand with porridge eat

It is Vundla who is eating sadza with his hand. (Ndebele prompt had this focus)

Tshau ka Vundla-be kua cadza ?nyũũ

tshau ka Vundla-be kua cadza ?nyũũ

hand with PN-sg.M IPFV porridge eat

It is with hand that Vundla is eating sadza.

Cadza ?e.be kua ?e.m tshau ka ?nyũũ.

Cadza ?e.be kua ?e.m tshau ka ?nyũũ

porridge 3sg.M IPFV 3sg.M hand with eat

It is sadza that Vundla is eating with his hand.

Vundla-be kua ℓxao kakx'oo.xo kae.tca.

Vundla-be kua ℓxao ka kx'oo.xo kae.tca

PN-sg.M IPFV spear with animal hunt

Vundla is hunting animals with a spear.

Vundla kua kx'oo.xo kae.tca ℓxao ka.

Vundla kua kx'oo.xo kae.tca ℓxao ka

PN IPFV animal hunt spear with

It is Vundla who is hunting animals with a spear. (Ndebele prompt had this focus)

ℓxao ka ?e.be kua kae.tca.

ℓxao ka ?e.be kua kae.tca

spear with 3sg.M IPFV hunt

It is with a spear that he is hunting.

Msindo-be kua mota ka Tsholotsho kũũ.

Msindo-be kua mota ka Tsholotsho kũũ
 PN-sg.M IPFV car with GN go

Msindo is going to Tsholotsho with a car.

Mota ka Msindo-be kua xa Tsholotsho kũũ.

mota ka Msindo-be kua xa Tsholotsho kũũ
 Car with PN-sg.M IPFV DEM GN go

It is with a car that Msindo is going to Tsholotsho.

Tsholotsho xa Msindo-be kua kũũ mota ka.

Tsholotsho a Msindo-be kua kũũ mota ka
 GN LOC PN-sg.M IPFV go car with

It is to Tsholotsho that Msindo is going with a car.

Q) *Nao kua hĩ-hĩ?*

Nao kua hĩ-hĩ
 what IPFV do-REFL

What is happening?

A) *lhii kua ʔaba ʔa tcui.*

lhii kua ʔaba ʔa tcui
 rhino IPFV dog O chase

A rhino is chasing a dog.

Q) *Nao kua hĩ-hĩ?*

Nao kua hĩ-hĩ
 what IPFV do-REFL

What is happening?

A) *Vundla-be kua Msindo-ba lx'am.*

Vundla-be kua Msindo-ba lx'am
 PN-sg.M IPFV PN-sg.M.O beat

Vundla is hitting Msindo.

Q) *Nao ?e ?ui.ka Sanqinyana hĩ-e-hĩ?*

Nao ?ui.ka Sanqinyana hĩ-e-hĩ
 what yesterday GN do-PAS-PST

What happened yesterday at Sanqinyana?

A) *Vundla-be Msindo-ba lx'am-a-ha.*

Vundla-be Msindo-ba lx'am-a-ha
 PN-sg.M PN-sg.M.O beat-J-PRF

Vundla hit Msindo.

Q) *Nao hĩ-hĩ-na-ha?*

nao hĩ-hĩ-na-ha
 what do-REFL-J-PRF

What happened?

A) *Kx'oo.xo ?e.be l?oo-ha.*

kx'oo.xo ?e.be l?oo-ha
 meat 3sg.M die:J-PRF

The meat is finished.

Q) *Nao ?e.m kama hĩ-nya-ha?*

nao ?e.m hĩ-nya-ha
 what 3sg.M do-J-PRF

What happened to Vundla?

A) *Msindo ?e.m kx'ai o lx'am-a-ha.*

Msindo ?e.m kx'ai o lx'am-a-ha
 PN 3sg.M face LOC beat-J-PRF

Msindo hit him in the face.

Q) *Uu nao e?*

uu nao ?e
 DEM what COP
 What is that?

A) *lxao e.*
lxao ?e
 spear COP
 It is a spear.

Interjection and Onomatopoeias

(a) Interjections

Excitement

Yee tire mari wana
yee tire mari ua.na
INTJ 1sg money have
 Yee, I have money!

Admiration

Yeyi ii tcuri ?e.be tsao-ha.
yeyi ii tcuri ?e.be tsao-ha
INTJ DEM year 3sg.M fat:J-PRF
 Yeyi, this year, he is fat.

Annoying or irritation

Ãã-ã tire kaa-ta.
Ãã-ã tire kaa-ta
INTJ 1sg like-NEG
 Ãã-ã, I do not like [this].

Surprise

A-a nao.ta ii xu e?
a-a nao.ta ii xuu e

INTJ what DEM thing Q

A-a, what is this?

Tiredness

Xuu kari,se tsxãã-ha.

xuu kari,se tsxãã-ha

INTJ INTENS be.tired:J-PRF

Xuu, I am very tired.

Knowing

Yaa ii xu tire ?ãna-ha.

yaa ii xuu tire ?ãna-ha

INTJ DEM thing 1sg know:J-PRF

Yaa, I know this.

Not knowing

Hii-i tire ?ãã-ta.

hii-i tire ?ãã-ta

INTJ 1SG know-NEG

Hii-i, I do not know.

Understanding

Woo tca kua mii-xu ti kua lam.

woo tca kua mii-xuu ti kua lam

INTJ 2sg.M IPFV say-thing 1sg IPFV feel

Woo, I understand what you are saying.

(b) Onomatopoeias⁹²

token	(in)animate/human	species		
wohwoh	animal	dog	vocal	barking
wauwau	animal	dog	vocal	barking
grr	animal	dog	vocal	growling
kx'aikx'ai	animal	dog	vocal	being beaten

⁹² See Andrason, Phiri and Fehn (forthcoming) for a detailed analysis.

kx'uakx'ua	animal	dog	vocal	being beaten
kl'uakl'ua	animal	dog	vocal	puppy
ŋããũŋããũ	animal	cat	vocal	meowing
(h)ihihihih	animal	horse	vocal	
oo-o-o-o	animal	donkey	vocal	
mhuumhuu	animal	cow	vocal	
meemee	animal	goat	vocal	
bfiuu	animal	bull	vocal	fighting/mating
xõõõ	animal	lion	vocal	
xãããõ	animal	lion	vocal	
vrrvrr	animal	lion	vocal	
djwii	animal	wild pig	vocal	when captured
duadua	animal	wild dog	vocal	
vrrr	animal	elephant	vocal	in the stomach
waawaa	animal	wolf	vocal	
				also
xoopopopopopo	animal	hippo	vocal	xaapopopopopo
xo?	animal	kudu	vocal	
mboomboo	animal	(wildebeest)	vocal	
aa-aa-aa	animal	springbok	vocal	captured
lihihihi	animal	horse	vocal	neigh
khokhokhokhokhokho	animal	horse	non-vocal	galloping scratching each other's back
krpukrpu	animal	donkey	non-vocal	
juijuirrrjuijuirrr	animal	birds	vocal	
ts-ts-tsui	animal	birds	vocal	
tatarata	animal	birds	vocal	
cc-cc	animal	goose	vocal	
hm-hm-hm-hm	animal	awl	vocal	
tcuaa	animal	small types of awl (yellow-billed	vocal	
kokoko(koko)	animal	hornbill)	vocal	
huduhuduhudu	animal	(ground hornbill)	vocal	
tc'uaaa	animal	(jacobin cuckoo)	vocal	
kekekekeke	animal	(woodpecker)	vocal	
tcatcatcaaaa	animal	guinea fowl	vocal	

APPENDIX III

Story of the Origin of Fire

The story was narrated in Tjwao and translated into Ndebele by the speakers.

Tuu.ʔa.ka ka ʔee habee.

Tuu.ʔa.ka ka ʔee habee
long.ago ANT fire be.NEG

Long ago there was no fire.

Glaro ka ʔee ua.na.

glaro ka lui ʔee ua.na
ostrich ANT only fire have

Only the ostrich had fire.

Ii.tsheedzini ka Djoʔua-be ʔe.be kua kae.tca-se

ii.tshee dzini ka Djoʔua-be ʔe.be kua kae.tca-se
DEM.day day ANT PN-sg.M 3sg.M IPFV hunt-ADVZ

Someday, Djolua was hunting.

ʔE.be glaro-m ʔae a ʔe.be sii-a-hĩ.

ʔe.be glaro-m ʔae a ʔe.be sii-a-hĩ
3sg.M ostrich-sg.M home LOC 3sg.M arrive-J-PST

He arrived at the ostrich home.

Glaro-be ʔe.be kua xuu-ra tsãã.xu.

glaro-be ʔe.be kua xuu-ra tsãã.xu
ostrich-sg.M 3sg.M IPFV thing-pl cook

The ostrich is cooking things.

Tcoa.n ʔii.ye Djoʔua-be ʔe.be kua ka kx'oa-ra xuu-ra ʔnyũũ.

tcoa.n ʔii.ye Djoʔua-be ʔe.be kua ka kx'oa-ra xuu-ra ʔnyũũ

person-pl all PN-sg.M 3sg.M IPFV ANT raw-pl thing-pl eat
 Everyone, Djo|lua himself, used to eat raw things/food.

Djo|lua-be ʔe.be ɡ|aro-m ʔae a sii kika, ɡ|aro-be ʔe.be ʔãã-na-ha xuu Djo|lua-be maa-hĩ.

Djo|lua-be ʔe.be ɡ|aro-m ʔae a sii kika, ɡ|aro-be ʔe.be
 PN-sg.M 3sg.M ostrich-sg.M home LOC arrive when ostrich-sg.M 3sg.M
ʔãã-na-ha xuu Djo|lua-be maa-hĩ
 know-J-PRF thing PN-sg.M give:J-PST

When Djo|lua arrived at the ostrich home, the ostrich recognized him and gave Djo|lua something.

Djo|lua-be ma ka tca.tco ɡ|aro-ba ʔe.be nao hĩĩ xuu-re tsãã.xu

Djo|lua-be ma ka tca.tco ɡ|aro-ba ʔe.be nao hĩĩ
 PN-sg.M QUOT ANT uncle ostrich-sg.M 3sg.M what do
xuu-re tsãã.xu
 thing-PL cook

Djo|lua [asked] what uncle (?) ostrich did, cooking things.

Ɣ|aro-be ʔe.be maa xuu-ra dzini a |ui ʔe ʔnyũũ-a-xu ʔe |ʔee ka |x'an-a maa-hĩ

Ɣ|aro-be ʔe.be xuu-ra dzini a |ui ʔnyũũ-a-xu
 ostrich-sg.M 3sg.M thing-pl sun LOC only eat-J-COMPL
|ʔee ka |x'an-a maa-hĩ
 fire with be.cooked-J give-PST

The ostrich [said] he ate things only with the sun, but he gave things cooked with fire.

ʔE.be xa nuu xa xuu hĩĩ-nya-naxuu-ra ʔnyũũ-ra |x'an-tam

ʔe.be xa nuu xa xuu hĩĩ-a-hĩ xuu-ra ʔnyũũ-ra
 3sg.M DEM place DEM thing do-J-PST thing-pl eat-pl
|x'an-tam
 be.cooked-NEG

Djo|lua did that thing at his place but the foods/things were not cooked.

ʔE.be ʔuu haa ka xa nuu ka kũũ

ʔe.be ʔuu haa ka xa nuu ka kũũ
 3sg.M morning come ANT DEM place to go

In the morning, he went there again.

ʔE.m ʔae garu-a ʔe.m xo.djoe kũũ kika ʔe.be dzoa mũũ-a-hĩ

ʔE.m ʔae garu-a ʔe.m xo.djoe kũũ kika
 3sg.M home ?near 3sg.M still go when

ʔe.be dzoa mũũ-a-hĩ

3sg.M ashes see-J-PST

When he was walking near his home, he saw ashes.

Xa dzoa ʔe.be kua mũũ kika ʔe.be ʔa.xua ʔãã ii tca.tco g|aro-be |ʔe wana

xa dzoa ʔe.be kua mũũ kika ʔe.be ʔa.xua ʔãã ii tca.tco
 DEM ashes 3sg.M IPFV see when 3sg.M then know DEM uncle

g|aro-be |ʔe ua.na

ostrich-sg.M fire have

When he sees those ashes, he then knows his uncle ostrich has fire.

Ti nata hĩ ii? |ʔee ti kua see-kaa.

ti nata hĩ ii |ʔee ti kua see-kaa
 1sg how do DEM fire 1sg IPFV take-VOL

What can I do? I want to take this fire.

Xa Djolua-be g|aro kua ʔae a kũũ.

xa Djolua-be g|aro kua ʔae a kũũ-a-hĩ
 DEM PN-sg.M ostrich IPFV home LOC go-J-PST

Djolua went to the ostrich's home.

Baabare ti kua cii.

baabare ti kua tcii
 uncle 1sg IPFV be.sick

Uncle, I am feeling sick.

Ti kua ndjaa-kaa.

ti kua ndjaa-kaa
1sg IPFV dance-VOL

I want to dance.

Toa tire kari-se |hore-ha.

toa tire kari-se |hore-ha
elder 1sg INTENS miss:J-PRF

Elder, I missed you very much.

?Ui |am |ũã-re ka haa.ka ti ndjaa-kua.

?ui |am |ũã-re haa ka ti kua ndjaa
evening time child-pl come with 1sg IPFV dance

In the evening, coming with the children, I will dance.

Glaro-be xa xuu ?am-a-hĩ.

Glaro-be xa xuu ?am-a-hĩ
ostrich-sg.M DEM thing agree-J-PST

The ostrich agreed to this thing/idea.

Djolua-be ?e.be glaro ?ui |am glaro-m ?ae a haa.

Djolua-be ?e.be glaro ?ui |am glaro-m ?ae a
PN-sg.M 3sg.M ostrich evening time ostrich-sg.M home LOC

haa

come

In the evening Djolua came to the ostrich's home.

Xa |ii simulula ng|ae.

Xa |ii simulula ng|ae
DEM song start sing

He starts (singing) the song.

Djolua-be ndjaa

Djolua-be ndjaa

PN-sg.M dance

Djolua dances.

Ndjaa kari-se ndjaa.

Ndjaa kari-se ndjaa

dance INTENS dance

He dances a lot.

Glaro-be kanye lam-a ?e.m djoe tan

Glaro-be kanye lam ?e.m djoe tan

ostrich-sg.M be.nice:COP hear 3sg.M also stand.up

When the ostrich hears that the song was nice, he also stands up.

?E.be tsui.tsui ndjaa

?e.be tsui.tsui ndjaa

3sg.M slow dance

He dances very slowly.

|?ee Glaro-m ?e.be kua ka ||?um a.

|?ee Glaro-m ?e.be xa ||?um a

fire ostrich-sg.M.O 3sg.M DEM ?armpit LOC

The fire is in the ostrich's armpit.

Djolua-be xa |?ee mĩũ ||?um a.

Djolua-be xa |?ee mĩũ ||?um a

PN-sg.M DEM fire see armpit LOC

Djolua sees the fire in the armpit.

Djolua-be kari-se ndjaa

Djolua-be kari-se ndjaa

PN-sg.M INTENS dance

Djolua dances very hard.

Glaro-be xa.ta hĩĩ

Glaro-be xa.ta hĩĩ
ostrich-sg.M like.that do

The ostrich did the same.

Xa |ʔee ʔa Djo|ua-be kari-se mũũ ii.xua

Xa |ʔee Djo|ua-be kari-se mũũ
DEM fire PN-sg.M INTENS see

Djolua saw the fire clearly.

ʔE.be xo.djoe ndjaa-se Djo|ua-be uu tca.tco kuni-a xa tca.tco ka |ʔee tcwabula.

ʔe.be xo.djoe ndjaa-se Djo|ua-be uu tca.tco |ʔee tcwabula
3sg.M still dance-ADV PN-sg.M DEM uncle fire take.away

While he is still dancing, Djolua takes away the uncle's fire.

ʔE.m ʔai-a xue

ʔe.m ʔai-a xue
3sg.M carry-J run

He runs away carrying it.

ʔE.be xa |ʔee djii nuu-a |x'am

ʔe.be xa |ʔee djii nuu |x'am
3sg.M DEM fire tree place hit

Djolua hits the tree area with the fire.

Djii ʔii.ye |ʔee sii karo tcum

djii ʔii.ye |ʔee ua.na karo tcum
tree all fire have stone with

All the trees and stones catch fire.

Glaro-be ʔe.be kua xa tcu-ra dzaro-kaa

Glaro-be ʔe.be kua xa tcu-ra dzaro-kaa
ostrich-sg.M 3sg.M IPFV DEM coalpl pick.up-VOL

The ostrich is trying to pick up the coals.

Xa tcu-re ʔii.ra ts'iri-a-hĩ

Xa tcu-re ʔii.ra ts'iri-a-hĩ
DEM coal-pl all extinguish-J-PST

All the coals were extinguished.

ʔE.be xa tcu ʔii.re ts'iri-a-hĩ

ʔe.be xa tcu-ra ʔii.re ts'iri-a-hĩ
3sg.M DEM coal all extinguish-J-PST

He extinguished all the coals.

Djo|ua-be kua tsii-a uu |ʔee ʔa.xua ka xa djii ʔii.a xa |ʔee see tcoa-ra maa-hĩ.

Djo|ua-be kua tsii-a uu |ʔee ʔa.xua xa djii ʔii.ra
PN-sg.M IPFV grow-J DEM fire and.then DEM tree all
xa |ʔee see tcoa-ra maa-hĩ
DEM fire take person-pl give:J-PST

Djo|ua is growing the fire, and then he took that tree and all that fire and gave it to the people.

Xa |ʔee simulula tcoa-n ʔii.ye-a |ʔee ua.na-setsui.na.

Xa |ʔee simulula tcoa-n ʔii.ye |ʔee ua.na-se tsui.na
DEM fire begin person-pl all fire have-ADVZ be

This is how fire started to be, and all the people having fire.