

THIRD PERSON PRONOUNS AND POSSESSIVES IN KWAK'WALA

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1. Introduction

This paper aims to compare Kwakwala 3rd person pronoun and possessive paradigms from our research working with a native speaker to the data presented by Boas (1947). Kwakwala has an extensive pronoun and possessive inventory. Not only they do vary in person, case, and number, they also change forms when different deictic and visibility conditions are applied (Boas 1947). Additionally, many researchers have shown that Kwakwala possessive phrases seem to use two possessive clitics: one is placed before the nominal, and one is placed after it.

For instance, in (1), the subject is a possessive phrase ‘your child’, while the 2nd person invisible pronominal possessive marker /=is/ is attached after the predicate /həm-ap/ ‘eat’ and precedes the nominal /χ^wənuk^w/ ‘child’. /=us/ is placed after /χ^wənuk^w/ ‘child’ and precedes the object accusative case marker /=χa/, which precedes the direct object /k^wənik^w/ ‘bread’.

- (1) həmapis χ^wənuk^wusχa¹ k^wənik^w
həm-ap=is χ^wənuk^w=us=χa k^wənik^w
eat-ap=2POSS.INV² child=2POSS=ACC.INV bread
‘Your (sg.) child (not visible) is eating the bread (not visible).’
(2021_06_30_MW_ee_wyf)

When we compare pronoun and possessive paradigm based on native speaker judgements to those described in Boas (1947), we see few differences in the 1st and 2nd person forms, and more differences in 3rd person forms. Moreover, the formation of 3rd person possessives is strongly related to pronouns in Kwakwala. This paper will focus on the 3rd person pronouns and possessives, and how they related to each other.

2. Methodology and Participants

The set of methodologies employed in this research broadly falls into the category of ‘linguistic elicitation’. The methodological framework that we applied is described in Bower (2015). For any semantic related data elicitation, we draw upon Matthewson

¹ The accusative case marker /=χa/ is analyzed as an enclitic in Kwakwala.

² The following abbreviations are used in this paper: 1, First person; 1EXCL, First person Exclusive; 1INCL, First person Inclusive; 2, Second person; 3, Third person; ACC, Accusative case maker; AUX, Auxiliary; CON, Connector; DEM, Demonstrative (Anderson, 2015); DET, Determiner; INS, Instrumental case marker; O, Object; PAST, Past tense; PL, Plural marker; POSS, Possessive.

(2004). Direct translations and grammaticality judgements were the main task for the data collection of this research.

One native Kwakwala speaker, Margaret Wilson (henceforth MW), is the language consultant of this research. She grew up in K̄alugwis (Turnour Island, BC). Her mother's ancestry is Ma'amtagila-Ławitsis (Tlowitsis), and her father's ancestry is Kwagu'ł (Kwakiutl). She was born in 1948. English was used as metalanguage for the consultant to translate sentences to Kwakwala. Data from other related literatures were used as well. The data collection was done through elicitation sessions over Zoom, and each session was recorded using Zoom's built-in recording feature. The recordings for these sessions were annotated through ELAN for archival purposes.

3. Gloss

Kwakwala examples in this research are written in the (slightly modified) North American Phonetic Alphabet (NAPA). For consistency, examples that are cited from other literature which use different symbols will be converted to NAPA.³

The gloss for each example includes four lines: the NAPA transcription of the Kwakwala data; a morpheme break down, the interlinear gloss, and the English translation. The equal symbol (=) is used to indicate enclitics, and the dash symbol (-) is used for suffixes. If an example is from other literatures, the original spelling of the sentence will be adopted.⁴ However, since many different analyses can occur for the same morpheme, for congruence purposes, the gloss for morphemes from other research will only be adopted when that morpheme is not analyzed in this paper. If the original gloss for an example is changed, an additional reminder of the change will also be indicated in a footnote (specifying the original gloss and other analyses for that morpheme, if applicable). If the example is from our elicitation session, a bracket will be at the end of the example including the date that the example was elicited, and the acronyms for people presented in the session. An example listed below in (2).

- (2) ixʔaxdax^wm̄uxax^w
 ixʔak=xdax^w=m̄=ux=ax^w
 like=PL=VER=3S=3O-VIS
 'They (visible) like them (visible).' (2021_06_16_MW_ee_wyf)

4. Language background

Kwakwala is a First Nations Language that is spoken by the Kwakwaka'wakw people. It is a north Wakashan language spoken on northwestern Vancouver Island, the adjacent

³ For conversion from NAPA to the U'mista orthography, the following symbols can be substituted freely: [ə] = *a*, [q] = *k*, [k^v] = *kw*, [q^w] = *k^w*, [χ] = *x*, [ʔ] = ' , [l] = *l*, [ə] = *a*, [ɛ] = *e*. Glottalized resonants are written with the apostrophe on top, i.e. [m̄] = 'm or m'. Other symbols are the same in both orthographies.

⁴ For example, /=*χ*-a/ is analyzed as combining an object marker /=*χ*/ and a demonstrative /-a/ by Anderson (2005); and it is considered just as an accusative case marker by Sardinha (2017), illustrating that the gloss of the same morpheme can differ between analysts.

mainland, and intervening islands, and in urban centers such as Victoria and Vancouver (Sardinha 2017). The language is severely endangered. Currently there are under 150 first language speakers remaining, most in their 70s or older; 139 according to the most recent survey by the First Peoples' Cultural Council (First Peoples' Cultural Council 2018).

Kwakwala is a polysynthetic language that has a VSO word order and Nominative-Accusative alignment in both its morphology and syntax. Kwakwala words are made of roots, clitics and suffixes. No prefixes exist in the language except for reduplication. Roots are usually but not always described as actions and states. The language possesses an elaborate system of clitics.

Anderson (2005) asserts that predicates (including auxiliary or lexical verbs) are always in the initial position in the clause. The subject of a sentence will follow the predicate if it is expressed overtly, then follow the objects and adjuncts. He analyzes the basic clause structure schema of Kwakwala as in (3).

(3) V—Sbj(— χ -Obj) (—s-Obj) (—PP) (Anderson 2005:13 (2.1))

Anderson (2015) argues that the subjects of both intransitive and transitive matrix clauses take nominative case, which in Kwakwala is zero-marked. Objects of transitive clauses, on the other hand, are marked with one of the language's two morphological case-markers: instrumental /s/ or accusative / χ /⁵.

(4) $y\acute{a}lk^w\acute{e}masida$ $b\acute{e}g^wan\acute{e}m\chi a$ $w\acute{a}tsisa$ $g^w\acute{a}\chi t\acute{u}\chi^w$
 $y\acute{a}lk^w\acute{e}mas=ida$ $b\acute{e}g^wan\acute{e}m=\chi-a$ $w\acute{a}tsi=s-a$ $g^w\acute{a}\chi t\acute{u}\chi^w$
 cause hurt=DEM man=ACC⁶-DEM dog=INS-DEM stick
 'The man hurt the dog with the stick.' (Anderson 2005: 13(2.2))

Our findings on case marking agrees with Anderson's (2005) assertions: an example of an object that receives accusative case is shown in (5), and an example of an object that receives instrumental case is shown in (6).

(5) $t\acute{u}su\chi da$ $b\acute{e}g^wan\acute{e}m\chi a$ $k^w\acute{e}nik^w$
 $t\acute{u}=u\chi=da$ $b\acute{e}g^wan\acute{e}m=\chi a$ $k^w\acute{e}nik^w$
 to cut with knife=VIS=DET man=ACC bread
 'The man (visible) is cutting the bread.' (2021_01_12_MW_ee_wyf)

(6) $bo\acute{w}ida$ $t\acute{s}\acute{e}daq\acute{e}sa$ $b\acute{e}g^wan\acute{e}m$
 $bo\acute{w}=i=da$ $t\acute{s}\acute{e}daq\acute{e}=sa$ $b\acute{e}g^wan\acute{e}m$
 leave=INV=DET woman=INS man
 'The woman (invisible) left the man (invisible).' (2021_01_12_MW_ee_wyf)

⁵ These two 'object marker' (/= χ / and /=s/) are combined with the demonstrative (/a/) and analyzed as case markers (/= χ a/ and /=sa/ accordingly) by Sardinha (2017). Their underlying forms are also analyzed /= χ / and /=s/ in other literatures (i.e., Rosenblum 2013).

⁶ The original analysis for this morpheme was object marker (Anderson 2005).

Additionally, case markers are used when objects are possessive phrases. An example of an object that receives accusative case is shown in (7), and an object that receives instrumental case is shown in (8):

- (7) həmapida gənanəmχus k^wənik^w
 həm-ap=i=da gənanəm=χ=us k^wənik^w
 eat-ap=INV=DET child=ACC=2POSS bread
 ‘The child (not visible) is eating your bread (sg. not visible).’
 (2021_06_30_MW_ee_wyf)

- (8) əmluχ busiyεχs feyεsuχda əmləmχ
 əmla=uχ busi-εχ=s feyε=s=uχ=da əmləm-χ
 play=3POSS.VIS cat-VIS=3POSS faye=INS-VIS-DET toy-VIS
 ‘Faye’s (visible) cat (visible) is playing with the toy (visible).’
 (2021_07_13_MW_ee_wyf)

Suffixes in Kwakwala have a wide range of meanings (such as indication of location or object specification). Morphemes in Kwakwala impose systematic effects on the meaning (i.e., /a/ denotes the action; /alas/ denotes materials) (Littell 2016). Interestingly, suffixes in Kwakwala can be lexical (i.e., have a specific meaning), and the root can have little or no meaning, unlike other languages.

5. The 3rd person pronoun paradigm in Kwakwala

Previous literature has shown that Kwakwala pronouns and possessive forms are distinguished in the following persons: 1st, 2nd and 3rd singular, 1st plural inclusive and exclusive, and 2nd and 3rd person plural⁷ (Boas 1974; Anderson 2005; Rosenblum 2015). Boas (1947) asserts that pronouns can be separated into two types of presentations: enclitics⁸ and independent forms⁹.

Boas (1947) shows that Kwakwala expresses strict deictic information in its suffixes and enclitics; and that distance has a three-way distinction: near the speaker (near 1st), near the addressee (near 2nd) and near person spoken of (near 3rd). He argues that this locative feature indication carries on to 3rd person pronouns and possessives as well. Additionally, the visibility of 3rd person is also identified in suffixes. A summary table of clitic pronouns is shown in table 1.¹⁰

⁷ There is no gender distinction in Kwakwala. Due to the limitations of this paper, plural forms will only be shown in pronoun and possessive tables, and will not be discussed in detail.

⁸ Boas (1947) analyzes these pronouns as suffixes instead of clitics in his research. This paper considers pronouns and possessives as enclitics. For the congruence of the terminology, we will refer to them as enclitics throughout this paper.

⁹ The composition and usage of independent pronouns are beyond the scope of this paper. Therefore, these points and forms will not be discussed.

¹⁰ Boas (1947) uses his own orthography to transcribe Kwakwala. Therefore, any table from Boas (1947) is converted based on the original source.

Table 1. Table of Pronoun clitics (Boas 1947: 252)

		Pronominal		
		Subject	Object	Instrumental
3 rd (near 1 st)	visible	=k	=qək	=sək
	not visible	=gaʔ	=χgaʔ	=sgaʔ
3 rd (near 2 nd)	visible	=uχ	=q ^w	=suχ
	not visible	= uʔ	= q^w/ quʔ	=suʔ
3 rd (near 3 rd)	visible	=iq	=q	=s
	not visible	= iʔ	= qi	=si

In order to check the paradigm Boas (1947) has provided, we had created sentences using one simple transitive predicate /ixʔak/ ‘like’, one unergative /daʔələ/ ‘laugh’, one unaccusative¹¹ /tiqaxa/ ‘fall’, and one ditransitive /kəlx^wa/ ‘buy’. The subjects and objects of these sentences were set to be different pronouns (both singular and plural). Because the sentences used pronouns, the context of these sentences (especially for those that have 3rd person as subjects or objects) were either phrased as the answer to someone’s question or based on an assumption that the person was relevant to the previous discourse. The table for subject and object pronouns based on MW’s sentences is in Table 2 below:

Table 2. Subject and object pronouns (based on data from MW)

		Subject	Direct Object	Indirect Object
3 rd	visible	=uχ	tɬ=aχ ^w	qəʔ=oχ
	not visible	=i	tɬ=aχ	qəʔ=ε
3 rd	visible	=xdax=uχ	=xdax ^w =tɬ=aχ ^w	qəʔ=εxdax ^w =uχ
Pl	not visible	=xdax ^w =i	xdax ^w =tɬ=aχ	qəʔ=εxdax ^w

The 3rd person pronouns we had elicited had fewer versions compared to what Boas (1947) had. It may be possible to elicit the full paradigm, but since the elicitation methodology for this paper is direct translation, it was difficult to set up a paradigm set to elicit all of them, and MW did not come up with them spontaneously. To situate these two conditions under Boas’ (1947) classification, we hypothesize that ‘near/visible’ is equivalent to ‘near 1st/2nd visible’, and that ‘far away/not visible’ is equivalent to ‘near 3rd invisible’.

Comparing tables 1 and 2, the 3rd person visible forms in our data look similar to what Boas (1947) has for 3rd person (near 2nd) visible. The invisible version in our data looks the same as 3rd person (near 3rd) invisible in Boas’ (1947) chart (bolded in table 1). In (9), when 3rd person is in the subject of a sentence, the subject pronoun /=uχ/ is used when the subject is visible (9a), and /=i/ is used when the subject is not visible (9b).

¹¹ The unergative/unaccusative is identified by the English translation instead of Kwakwala.

- (9) a. ixʔakuχ gaχən
 ixʔak=uχ gaχ=ən
 like=3S.VIS ga=1O
 ‘He/She (visible) likes me.’
- b. ixʔaki gaχən
 ixʔak=i gaχ=ən
 like=3S.INV ga=1O
 ‘He/She (not visible) likes me.’ (2021_06_10_MW_ee_wyf)

Comparing the 3rd person pronouns in the direct object and indirect object column in Table 2, all object pronouns are attached to stems. For direct objects, 3rd person forms are attached to /tʰ-/. According to Littell (2016) the root /tʰ-/ only occurs when used as a connector when the subject is 1st person singular. This is also shown in our data. In (10), when 1st person singular is in the subject position, /tʰ/ precedes the 3rd person object. However, when the subject changes to 1st person inclusive in (11), the 3rd person object is not attached to /tʰ-/.

- (10) ixʔakən tʰaχ^w
 ixʔak=ən tʰ=aχ^w
 like-1S CON=3-VIS
 ‘I like him/her (visible).’ (2021_06_19_MW_ee_wyf)

- (11) ixʔakənʔsaχ
 ixʔak=ənʔs=aχ
 like=1INCLS=3O
 ‘We (inclusive, visible) like him/her (not visible).’ (2021_06_19_MW_ee_wyf)

All indirect object pronouns are attached to a stem /qa-/. According to Boas (1947), there is a subordinate marker /qa-/, which is frequently translated as ‘for’, ‘on the account of’ or ‘because’. It can combine with possessive enclitics, usually precedes a separated predication and links two separate events in a purposive relationship (Rosenblum 2015).

To conclude this section, 3rd person pronouns can be differentiated depending on the visibility and deictic information of the sentence. Subject and indirect object forms for 3rd person are the same. 3rd person pronouns for direct object are different compared to the other two versions.

6. The 3rd person possessive paradigm in Kwakwala

Like pronouns, possessives in Kwakwala are also distinguished in 1st, 2nd and 3rd singular, 1st plural inclusive and exclusive and 2nd and 3rd person plural. Possessives for all three persons encode visibility information. In addition to that, 2nd and 3rd person possessives also encode deictic information (identify whether the possessor is near 1st, 2nd or 3rd). Because of this, sentences that have possessives are more complicated than sentences with simple pronouns. For instance, in a sentence like ‘She likes his bread’, speakers can express

the visibility and deictic information for the subject ‘she’, the object possessor ‘he’, and the possessed object ‘bread’.

However, from our observation, most of the time, not every clitic will present in sentences explicitly.¹² There are two possible explanations for this. First, many of these clitics are identical in their phonological forms. Therefore, they often coalesce together for ease of pronunciation. Secondly, speakers may feel that it is unnecessary to express everything in a discourse situation unless they want to be very specific; we observe that certain clitics are optional in some contexts where they may be redundant or already clear from the context.

Another difference between pronouns and possessives is that possessive forms in Kwakwala have been claimed to be expressed by a combination of two morphemes, a prenominal and a postnominal clitic. In the literature, 3rd person possessives add an extra layer of complication compared to the 1st and 2nd person possessives in Kwakwala.

According to Boas (1947), 3rd person possessives in Kwakwala also vary depending on deictic information and visibility in the context of the discourse. Additionally, when a noun is possessed, whether or not the possessor is equal to the subject of the sentence will also determine the form of the possessive. The organized table for 3rd person possessive from Boas (1947) is listed in table 3 below:¹³

Table 3. Table of Possessive enclitics for 3rd person (Boas 1947: 254V(b))

		near 1 st		near 2 nd		near 3 rd	
Subject = Possessor		<i>visible</i>	<i>not visible</i>	<i>visible</i>	<i>not visible</i>	<i>visible</i>	<i>not visible</i>
3 rd	<i>prenominal</i>	-gas		-os		-es	
	<i>postnominal</i>	-k	gaʔ	-q/-eχ	-q̣/-aq	/	-a
Subject ≠ Possessor							
3 rd	<i>prenominal</i>	ga		-oχ		-e	
	<i>postnominal</i>	-gas	gaʔes ¹⁴	-xs/-aχs	q̣es	-s	-as

From the table, we can see that the 3rd person possessive first distinguishes between whether the subject of the sentence is equal to the possessor. Then, the prenominal clitics are assigned based on the locative information of the possessor (near 1st, 2nd or 3rd). On top of that, depending on the visibility of the possessor, the postnominal clitic varies as well. There is the additional /g-/ segment preceding on the near 1st forms. This could be stem /gaχ/ ‘come’. Comparing all the possessive forms when subject is equal to the possessor, if not considering the stem /g-/, the prenominal clitic from table 8 (/as/~os/~es/) looks

¹² This will later be explained in detail when discussing 3rd person possessives.

¹³ Since we were not able to elicit the whole deictic paradigm (near 1st, 2nd, 3rd), and based on the pronoun data we had in table 2, MW seems to provide forms that resemble Boas’ (1947) near 2nd visible (for visible) and the near 3rd invisible (for invisible). Therefore, when we compare data from our table (table 4) to what’s been reported by Boas (1947), only these bolded forms will be compared (bolded in table 3).

¹⁴ Kwakwala usually has a glottal stop between two vowels. In Boas’ (1947) original chart, this glottal stop is not included, however, since it is a common feature, we have included a glottal stop here to avoid confusion.

similar, with vowel differences potentially caused by phonological changes. The postnominals, however, have a variety of forms. Comparing them to the forms that occur when subject and possessor are not the same, the vowel seems to stay the same for the prenominal clitics. Postnominal clitics, however, seem to occur in different forms.

In our elicitation sessions, to determine the pattern of 3rd person possessives for transitive sentences, we used both accusative (/ixʔak/ ‘eat’) and instrumental verbs¹⁵ (/əmɫa/ ‘play’). For ditransitive sentences, we used verbs such as /kəlɫwɑ/ ‘buy’. Additionally, we created sentences with R-expressions to capture how possessive forms change with proper names. The forms for 3rd person possessives are shown in table 4.

Table 4. Possessive postnominal enclitics (3rd person) (based on data from MW)

3 rd Person		Singular		Plural	
		<i>visible</i>	<i>not visible</i>	<i>visible</i>	<i>not visible</i>
<i>Subject = Possessor</i>	<i>prenominal</i>	=us	=is	=xdax ^w =(us)	=xdax ^w =is
<i>Subject ≠ Possessor</i>	<i>prenominal</i>	3 rd person pronouns ¹⁶			
	<i>postnominal</i>	=s=uχ	=εs	=xdax ^w =s=uχ	=xdax ^w =εs

Comparing table 4 to what has been reported in the literature, our table looks quite different, but there are also similarities. For instance, we do not have postnominal elements for 3rd person possessives when they are coindexed with the subject. What creates the major difference between Boas’ tables and ours is that Boas (1947) analyzes the moved morphemes as prenominal elements.¹⁷ In our analysis, the postnominal position of a noun contains a string of morphemes that possess different functions. When the prenominal pronoun is omitted, part of the postnominal morpheme can move to the prenominal position, and the rest stays *in situ*. Additionally, our data shows that 3rd person pronouns are placed in the prenominal position when subject and the possessor are not co-indexed.¹⁸

6.1.1. Non-coindexing possessive

In (12), there are two examples with the 3rd person possessive phrase ‘his/her bread’ in the object position of an accusative verb /həm-ap/ ‘eat’. The subject is ‘your child’ and it coindexes with the object possessor ‘his/her’.

¹⁵ By accusative and instrumental verbs, we refer to verbs in Kwakwala that assign those two cases in a default setting (i.e., in ‘the cat_i likes his_{i/j} toy’, ‘his toy’ is assigned with accusative case and is expected to receive the accusative case marker /=χ/).

¹⁶ Here, we did not include the form for prenominal 3rd person pronoun because the pronouns will alternate depending on their position in the sentence (i.e., visible 3rd person subject pronoun will be used with the according visible possessive when it is placed in the subject position); we will present examples later to support this argument. We will leave the prenominals as 3rd person pronouns here.

¹⁷ The detailed discussion for this movement is included in Wang (2021).

¹⁸ From this point, we will refer possessives when subject and the possessor are not co-indexed as ‘non-coindexing possessive’ and the opposite as ‘coindexing possessive’.

- (12) a. $\text{h}\ddot{\text{a}}\text{m}\text{-ap}=\text{us}$ $\chi^{\text{w}}\ddot{\text{a}}\text{nuk}^{\text{w}}\text{dax}^{\text{w}}\varepsilon\text{qusa}\chi$ $\text{k}^{\text{w}}\ddot{\text{a}}\text{nik}^{\text{w}}\varepsilon\text{su}\chi$
 $\text{h}\ddot{\text{a}}\text{m}\text{-ap}=\text{us}$ $\chi^{\text{w}}\ddot{\text{a}}\text{nuk}^{\text{w}}=\text{x}\text{dax}^{\text{w}}-\varepsilon\chi=\text{us}=\chi=\text{a}\chi$ $\text{k}^{\text{w}}\ddot{\text{a}}\text{nik}^{\text{w}}=\text{su}\chi$
eat-ap=2POSS.VIS child=PL-VIS=2POSS=ACC=3O bread=3POSS.VIS
‘Your (pl.) child_i (visible) is eating his/her_i (visible) bread (visible).’
- b. $\text{h}\ddot{\text{a}}\text{m}\text{-ap}=\text{is}$ $\chi^{\text{w}}\ddot{\text{a}}\text{nuk}^{\text{w}}\text{x}\text{dax}^{\text{w}}\text{usa}\chi$ $\text{k}^{\text{w}}\ddot{\text{a}}\text{nik}^{\text{w}}\varepsilon\text{s}$
 $\text{h}\ddot{\text{a}}\text{m}\text{-ap}=\text{is}$ $\chi^{\text{w}}\ddot{\text{a}}\text{nuk}^{\text{w}}=\text{x}\text{dax}^{\text{w}}=\text{us}=\chi=\text{a}\chi$ $\text{k}^{\text{w}}\ddot{\text{a}}\text{nik}^{\text{w}}=\varepsilon\text{s}$
eat-ap=2POSS.INV child=PL-VIS=2POSS=ACC=3O bread=3POSS.INV
‘Your (pl.) child_i (not visible) is eating his/her_i (not visible) bread (not visible).’
(2021_06_17_MW_ee_wyf)

The possessive marker /=suχ/ is placed after the noun /k^wənik^w/ ‘bread’ in (12a). When the possessor is invisible, /=εs/ is used in the same position instead. Interestingly, there is a morpheme that looks identical to the 3rd person direct object pronoun /=aχ/ (from table 2), and it is placed before the object noun /k^wənik^w/ ‘bread’ for (12a). This provides two possibilities, first, this /=aχ/ is a phonetic variant of the accusative case /=χ/, /a/ is inserted between two consonants. Second, this /=aχ/ is a prenominal element that occurs with 3rd person possessive phrases.

With these two possibilities in mind, let us look at the example in (13), which has a different accusative verb /kəp̄i/ ‘cut’, and the object is also a 3rd person possessive ‘his hair’. The subject is an invisible 3rd person singular pronoun /=i/ ‘she’¹⁹, which does not coindex with the object possessor. After the subject, the accusative case marker /=χ/ is pronounced explicitly in (13), preceding /aχ/. The invisible 3rd person possessive /=εs/ still attaches to the object noun /səȳa/ ‘hair’, which patterns with (12b). Therefore, this rules out the possibilities for /=aχ/ being an accusative case marker in (12).

- (13) $\text{k}\ddot{\text{a}}\text{p}\ddot{\text{i}}\text{-xd}=\text{i}=\chi=\text{a}\chi$ $\text{s}\ddot{\text{a}}\text{y}\varepsilon\text{s}$
 $\text{k}\ddot{\text{a}}\text{p}\ddot{\text{i}}\text{-xd}=\text{i}=\chi=\text{a}\chi$ $\text{s}\ddot{\text{a}}\text{y}\varepsilon=\varepsilon\text{s}$
cut-PAST=3S.INV=ACC=3O.INV hair=3POSS.INV
‘She_i (not visible) cut his_j (not visible) hair (not visible).’²⁰
(2021_07_20_MW_ee_wyf)

Based on (13) and (12), /=aχ/ seems to be a prenominal element that occurs with 3rd person possessives and looks like the 3rd person direct object pronoun (minus the /t̄-/ stem). Therefore, it is possible that the accusative case marker /χ/ is phonologically deleted (or coalesced with /s/) in (12).

In fact, the presence of the accusative case marker /=χ/ in the beginning of a possessive phrases does not seem to be obligatory in other cases as well. For instance, the example in (14), has an accusative verb /həm-ap/ ‘eat’, the subject is the 1st person singular

¹⁹ Our target sentences use gender, even though this is not syntactically marked in Kwakwala. This is because we want to make the non-coindexation between subject and object possessor situation explicit to MW without saying too many conditions when she is translating the sentence.

²⁰ To bring out the proper context for using the ‘she’ and ‘his hair’, we first asked the consultant to translate ‘Faye cut her friend’s (male) hair’.

/=ən/, and the object is the 3rd person possessive phrase ‘his/her bread’. Within expectation, we can see that /=aχ/ is placed preceding the object noun /k^wənik^w/ ‘bread’. However, we do not see the accusative case marker preceding /=aχ/. Instead, it attaches to the connector /t-/, which is used when 1st person is the subject of the sentence.

- (14) həmapən təχ k^wənik^wɛsuχ
 həm-ap=ən t=aχ k^wənik^w-ɛχ=suχ
 eat-AP=1S CON=3O bread-VIS=3POSS.VIS
 ‘I am eating his/her bread (visible).’ (2021_07_21_MW_ee_wyf)

Based on the examples above, the accusative case marker /=χ/ does not always need to be present when possessive phrases are used in object position. This optionality seems to be reasonable since the 3rd person direct object pronoun already encodes accusative case.

In addition, the pronominal /=aχ/ is not obligatorily to present when 3rd person possessives are used as well. Comparing (15) to (14), we have a different accusative verb /kəkadəxsila/ ‘read’, a visible 3rd person singular subject /=uχ/ ‘he’, which is not coindexed with the visible object possessor /=suχ/ ‘her’. Like (15), the visible 3rd person possessive /=suχ/ appears after the object noun /buk^w/ ‘book’. However, we do not see the /=aχ/ occur before it.

- (15) kəkadəxsiluχ buk^wɛsuχ
 kəkadəxsila=uχ buk^w-ɛχ=suχ
 read=3S.VIS book-VIS=3POSS.VIS
 ‘He_i (visible) is reading her_j book (visible).’ (2021_07_21_MW_ee_wyf)

It might be possible to guess that /=uχ/ and /=aχ/ coalescence in (15) due to their similarity in pronunciation. However, in (16), the 3rd person subject /=uχ/ after the predicate /həm-ap/ ‘eat’, and the pronominal /=aχ/ is placed after the subject pronoun and before the object noun /k^wənik^w/ ‘bread’. This first shows that /=uχ/ and /=aχ/ did not coalesce in (15). Additionally, the visible object possessor /=suχ/ is omitted in (16).

- (16) həmapuχaχ k^wənik^wɛχ
 həm-ap=uχ=aχ k^wənik^w-ɛχ
 eat-ap=3S.VIS=3O bread-VIS
 ‘He_i (visible) is eating her_j bread (visible).’ (2021_07_21_MW_ee_wyf)

Based on (15) and (16), possessive phrases seem to have the option of omitting either the pronominal or postnominal element. However, this optionality does not occur naturally when the subject and possessor in (15) and (16) become invisible. Their invisible versions are shown in (17) and (18). Comparing them to (15) and (16), here we see that /=aχ/ appears after the accusative case marker, and before the object noun /buk^w/ ‘book’. The invisible 3rd person postnominal /=ɛs/ occurs after object noun.

- (17) $\begin{array}{ll} \dot{k}\acute{a}k\acute{a}d\acute{e}x\text{s}i\text{l}i\chi\acute{a}\chi & \text{buk}^w\text{e}s \\ \dot{k}\acute{a}k\acute{a}d\acute{e}x\text{s}i\text{l}a=i=\chi=\acute{a}\chi & \text{buk}^w=\text{e}s \\ \text{read}=3\text{S}.\text{INS}=\text{ACC}=3\text{O} & \text{book}=3\text{POSS}.\text{INS} \\ \text{'He}_i \text{(not visible) read her}_j \text{book (not visible).'} & (2021_07_21_MW_ee_wyf) \end{array}$
- (18) $\begin{array}{ll} \text{h}\acute{a}\text{m}\text{x}\text{?}i\text{d}i\chi\acute{a}\chi & \text{k}^w\acute{a}\text{n}i\text{k}^w\text{e}s \\ \text{h}\acute{a}\text{m}\text{-x}\text{?}i\text{d}=i=\chi=\acute{a}\chi & \text{k}^w\acute{a}\text{n}i\text{k}^w=\text{e}s \\ \text{eat-ap}=3\text{S}.\text{INV}=\text{ACC}=3\text{O} & \text{bread}=3\text{POSS}.\text{INS} \\ \text{'He}_i \text{(not visible) ate her}_j \text{bread (not visible).'} & (2021_07_21_MW_ee_wyf) \end{array}$

Although the presence of /=aχ/ appears sometimes when the 3rd person possessive phrases are placed in object position, it is not shown when the possessives are in subject position. Instead, we see the subject pronoun. An invisible version of a simple transitive sentence ‘her child is eating the bread’²¹ is shown in (19).

- (19) $\begin{array}{l} \text{h}\acute{a}\text{m}\text{a}\text{p}i \chi^w\acute{a}\text{n}u\text{k}^w\text{e}\text{s}\acute{a}\chi\acute{a} \text{k}^w\acute{a}\text{n}i\text{k}^w \\ \text{h}\acute{a}\text{m}\text{-ap}=i \chi^w\acute{a}\text{n}u\text{k}^w=\text{e}\text{s}=\chi \text{k}^w\acute{a}\text{n}i\text{k}^w \\ \text{eat-ap}=3\text{S}.\text{INV} \text{child}=3\text{POSS}.\text{INV}=\text{ACC} \text{bread} \\ \text{'Her child (not visible, far) is eating the bread (not visible).'} \\ (2021_07_08_MW_ee_wyf) \end{array}$

We can see that when the subject is a possessive phrase, we have the 3rd person invisible subject pronoun /=i/ placed after the predicate /həm-ap/ ‘eat’. After the subject noun /χ^wənuk^w/ ‘child’, we see the 3rd person invisible possessive /=es/ attached. Then follows the accusative case marker and object. This /=i/ is identical to the invisible 3rd person subject pronoun we had in table 2 (again, here they receive the syntactic nominative case).

Based on above examples, when the possessor and the subject of the sentence are not coindexed, depending on the position of the possessive, the according 3rd person pronoun is optionally placed in the prenominal position. When a possessive phrase is expressed fully, a pronoun is expected in the prenominal position. Depending on the possessive’s position in the sentence (i.e., subject or direct object) and its visibility, the according pronouns will be used. The postnominal position contains the possessive forms. For the visible possessors, there are two morphemes: /=s/ and /=uχ/. If the possessor is invisible, /=es/ is used instead. The prenominal pronoun and the postnominal possessive are both flexible in terms of their presence in the possessive phrase. When the prenominal pronoun is omitted, the postnominal possessive has the option of moving to the prenominal position for visible sentences.

²¹ The context for the invisible version of ‘her child is eating the bread’ is when the consultant sees someone’s child eating the bread in one room, and then she goes to a different room and tells her cousin the story.

6.1.2. Coindexing possessives

The last subsection has shown how 3rd person non-coindexing possessive phrases in Kwakwala. However, the possessive pattern changes when a ‘coindexing possessor’²² occurs in a clause. A completely different set of possessive forms are used. These forms only occur prenominal, instead of moving from a postnominal position like the non-coindexing possessives. In this subsection, we will exemplify the pattern for coindexing possessive phrases with some example sentences and show the conditions to obtain this pattern.

According to Boas (1947) and Anderson (2005), when the possessor is 3rd person and coindexed with the subject of the clause, a different set of possessive forms is used. This phenomenon is also shown in our data. For instance, (20) has a 3rd person possessor ‘her’ which is coindexed with the subject of the sentence ‘Faye’ (the visible version is shown in (20a) and invisible is shown in (20b)).

- (20) a. $h\acute{o}m\acute{a}p\acute{u}\chi$ $fey\epsilon\chi us$ $k^w\acute{o}nik^w\epsilon\chi$
 $h\acute{o}m\text{-}ap=us\chi$ $fey\epsilon=\chi=us$ $k^w\acute{o}nik^w\text{-}\epsilon\chi$
eat-ap=3S.VIS faye=ACC=3POSS.VIS bread-VIS
‘Faye_i (visible) is eating her_i bread (visible).’ (2021_07_28_MW_ee_wyf)
- b. $h\acute{o}m\acute{a}p\acute{i}$ $fey\epsilon\chi is$ $k^w\acute{o}nik^w$
 $h\acute{o}m\text{-}ap=i$ $fey\epsilon=\chi=is$ $k^w\acute{o}nik^w$
eat-ap=3S.INV faye=ACC=3POSS.INV bread
‘Faye_i (not visible) is eating her_i bread (not visible).’
(2021_07_28_MW_ee_wyf)

When the possessor is visible, /=us/ is used instead of /=suχ/ in the prenominal position. When the possessor is not visible, /=is/ is used instead of /=εs/. Both possessors in (20) occurs in the prenominal position, after the accusative case marker /=χ/.

The same patterns occur with instrumental predicates, in (21), we have a visible version of the sentence ‘Faye is leaving her house’.

- (21) $bow\acute{u}\chi$ $fey\epsilon\chi=sus$ $guk^w\epsilon\chi$
 $bow\acute{u}=\acute{u}\chi$ $fey\epsilon\text{-}\epsilon\chi=s=us$ $guk^w\text{-}\epsilon\chi$
leave=3S.VIS faye-VIS INS=3POSS.VIS house-VIS
‘Faye_i (visible) is leaving her_i (visible) house (visible).’
(2021_07_28_MW_ee_wyf)

Similar to (20a), /=us/ is also used in the prenominal position of (21). Since the predicate /bow / ‘leave’ assigns an instrumental case, instrumental case marker /=s/ occurs before

²² From this point we will use ‘coindexing possessor’ to refer to the situation when possessor that is considered equal to the subject of the sentence, and ‘non-coindexing possessor’ when they are not equal.

/=us/. Based on (20) and (21), the coindexing visible possessive /=us/ seems to only occur in the prenominal position.

In (22), we intentionally moved the coindexing possessive /=us/ to the postnominal position, which is the place where the non-coindexing possessive usually occurs, after the visibility marker /=εχ/. However, (22) was considered ungrammatical by the consultant. Therefore, unlike the non-coindexing possessives, the coindexing ones are not moved from postnominal position. There is also no clear evidence shows that pronouns are used with the coindexing possessives.

- (22) *bowuχ feyεχs guk^wεχus
 bow^o=uχ feyε-εχ=s guk^w-εχ=us
 leave=3S.VIS Faye-VIS=INS house-VIS=3POSS.VIS
 ‘Faye_i (visible) is leaving her_i (visible) house (visible).’
 (2021_07_28_MW_ee_wyf)

Additionally, as stated by Anderson (2005), this co-indexation between subject and possessor is constrained to within 3rd person. For instance, in (23), where the subject ‘your child’ is coindexed with the object possessor ‘his/her’, we do not see the coindexing possessive /us/; instead, we see the non-coindexing /=suχ/ in postnominal position, and /=aχ/ in the prenominal position.

- (23) həmapus χ^wənuk^wdax^wεqusaχ k^wənik^wεsuχ
 həm-ap=us χ^wənuk^w=xdax^w-εχ=us=aχ k^wənik^w=s=uχ
 eat-ap=2S.VIS child=PL-VIS=2POSS=3S child=3POSS.VIS
 ‘Your (pl.) child (visible)_i is eating his/her (visible)_i bread (visible).’
 (2021_07_06_MW_ee_wyf)

Comparing (23) to (24), when the subject is 3rd person (Faye’s cat) and not coindexed with the object possessor, the movement of /=uχ/ to the prenominal position occurs.

- (24) naquχ busiyεχs feyεχuχ w̄apεχs
 naχ_i=uχ busi-εχ=s feyε=χ=uχ w̄ap-εχ=s
 drink=3S.VIS cat-VIS=s faye=ACC=uχ²³ water-VIS=s
 ‘Faye_i's cat (visible) is drinking her_i (visible) water (visible).’
 (2021_07_21_MW_ee_wyf)

However, in (25), when the subject is 3rd person (Faye) and co-indexed with the object possessor (her), we see that /us/ occurs instead of /=uχ/ in the prenominal position of (25).

²³ Since the separate function and meaning of /=s/ and /=uχ/ are unclear, when they are stranded, we will use their original form in the gloss line instead of a gloss, 3POSS.VIS will still be used (two times since the function of /=uχ/ remains unclear) when they occur together in a postnominal position.

- (25) $\begin{array}{lll} \dot{k}\acute{a}\rho\upsilon\chi & \text{fey}\epsilon\chi\text{us} & \text{s}\acute{o}\acute{y}\acute{\alpha}\chi \\ \dot{k}\acute{a}\rho\iota=\text{u}\chi & \text{fey}\epsilon=\chi=\text{us} & \text{s}\acute{o}\acute{y}\acute{\alpha}-\epsilon\chi \\ \text{cut}=3\text{S.VIS} & \text{faye}=\text{ACC}=3\text{POSS.VIS} & \text{hair-VIS} \end{array}$
 ‘Faye_i (visible) is cutting her_i (visible) hair (visible).’ (2021_07_21_MW_ee_wyf)

/=us/ and /=is/ are also used when the possessor is coindexed with a regular DP. In (26), we have the visible (26) of the sentence ‘the cat is eating his/her bread’. Similar to (25), /=us/ appears before the possessed noun /k^wənik^w/ ‘bread’ when the possessor is visible.

- (26) $\begin{array}{lll} \text{h}\acute{o}\text{m}\acute{\alpha}\rho\upsilon\chi\text{da} & \text{busi}\chi\text{us} & \text{k}^{\text{w}}\acute{\epsilon}\text{n}\text{i}\text{k}^{\text{w}}\epsilon\chi \\ \text{h}\acute{o}\text{m}-\text{ap}=\text{u}\chi=\text{da} & \text{busi}-\epsilon\chi=\chi=\text{us} & \text{k}^{\text{w}}\acute{\epsilon}\text{n}\text{i}\text{k}^{\text{w}}-\epsilon\chi \\ \text{eat-ap}=\text{VIS}=\text{DET} & \text{cat-VIS}=\text{ACC}=3\text{POSS.VIS} & \text{bread-VIS} \end{array}$
 ‘The cat_i (visible) is eating his/her_i bread (visible).’ (2021_06_17_MW_ee_wyf)

It is interesting that the visibility marker in a regular DP (‘the cat’) patterns with the 3rd person subject pronoun, as seen in (26), this DP is preceded by /=uχ/, especially if we consider the construction of proper name DPs in Kwakwala. However, due to the time limitations, this hypothesis was not tested. Potentially, we could ask the consultant to translate sentences like ‘you are eating the cat’s bread’ to see whether the direct object pronoun would appear. If not, there is another possibility, that the pronoun carries 3rd person *phi*-features (namely, ‘it’ in (26)). The coindexing possessive, /=us/ for visible and /=is/ for invisible, are actually reflexives that are coindexing with it.

Based on our data, specific conditions are required for coindexing possessives. These two conditions occurring at the same time will trigger the application of coindexing possessives in Kwakwala:

- I. When the subject pronoun/possessor is a 3rd person (i.e., s/he/it/they; his/her/its/their) or a regular none-possessed DP that can be replaced by a 3rd person pronoun (i.e., the cat/proper noun = it/s/he).
- II. When the subject DP is coindexed with the object possessor.

In situations where the subject possessive phrase is coindexed with the object possessor but not in 3rd person (e.g. your child_i is eating his_i bread), the change will not be triggered.

Due to the conditions where the coindexing possessives are adopted, it seems to provide additional evidence for /=uχ/ and /=i/ being 3rd person pronouns that encode *phi*-features and provide reference for elements that need coindexation in a phrase. In that case, it seems reasonable for pronouns to be re-stated prenominal in the non-coindexing possessive phrases.

Since the subject and object possessor are both 3rd person but differ in their *phi*-features, informing a new set of *phi*-features seems possible. It also clarifies which 3rd person possesses the noun in the object position, especially if we consider that the most stable usage of prenominal pronouns occurs when both the subject and the object of a sentence is invisible (i.e. the need for explicitly informing hearer that there are two different “3rd persons” may be greater compared to when they are visible to both speaker and hearer).

7. Conclusion

This paper has compared Kwakwala pronoun and possessive paradigm from our research to the data presented by Boas (1947). For pronouns, 3rd person pronouns can be differentiated depending on the visibility and deictic information of the sentence. For 3rd person non-coindexing possessives, unlike Boas (1947), we analyze the postnominal position of a noun contains a string of morphemes that possess different functions. 3rd person pronouns are placed in the prenominal position. When the prenominal pronoun is omitted, movement occurs from postnominal position to prenominal position. This analysis can also explain the similarity between Boas' (1947) coindexing prenominal to our coindexing postnominal.

However, despite all these potential analyses, there are still many aspects that remain puzzling in Kwakwala. For instance, which category do those moveable postnominals fall under and why do they appear in the prenominal position? Do they have any relation to the 3rd person pronoun (due to its similar phonological representation)? All these topics would be interesting for future research.

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