The Role of the Voice System within Kwak'wala Grammar[*]

Katie Sardinha
University of British Columbia

Abstract: The Kwak'wala voice system consists of a set of voice morphemes that are used to create a wide array of sentence types. Previous analyses of these morphemes have emphasized their status as nominalizers and their resemblance to passives. In this paper, I provide a new perspective on the role of the voice system, namely as a mechanism for expressing indefinite arguments. The shape of this system is a consequence of the fact that in Kwak'wala, indefinite roots are exclusively verbal.

Keywords: Kwak'wala, Wakashan, voice system, nominalization, indefinites

1   Introduction

Kwak'wala is a Wakashan language spoken on the central coast of British Columbia, Canada, by members of the Kwakwaka'wakw nation. The language is spoken as a first language by around 200 speakers, and there is widespread community interest and involvement in its revitalization (FPCC 2022). While five dialects of the language are generally recognized (Anonby 1997), the language data which contributed to this paper comes from elicitation with speakers of two dialects: the central (Kwak'wala) dialect spoken in Fort Rupert, Kingcome, and Alert Bay; and the Nak'wala dialect, spoken in T'sulquate.

Kwak'wala has a set of *voice morphemes* that are used to construct a wide array of sentence types. Example (1)[1] shows an active clause, which contains no voice morpheme. The sentences in (2) to (6), which differ minimally in form and meaning from (1), contain the voice morpheme, *-saẃ/-su'*[2] and illustrate five voice constructions: passives (2), relative clauses (3), information questions (4), answer clefts (5), and antipassives (6).

[1] Abbreviations used in the paper: - 'suffix', = 'clitic', ACC 'accusative case', AUG 'augmentative', C.VOICE 'Co-initiator voice, D2 'third-person medial (this, close by)', D3 'third-person distal (that, over there)', D4 'assertion-of-existence deictic (Black 2011)', DET 'determiner', EMB 'embedding vowel', EMPTY.ROOT 'root with no lexical meaning', FV 'final vowel', JF 'judged form', I3 'third-person distal invisible (possibly *=a=i =FV=NMZ*)', I.VOICE 'instrument voice', INCL 'inclusive', INST 'instrumental case', L.VOICE 'Location voice', N.VOICE 'Non-initiator voice', NMZ 'nominalizer', OST 'ostensive determiner', POSS 'possessor', PL 'plural', PREP 'preposition', PROC 'process event type', REFL 'reflexive', R.VOICE 'Reason voice', STAT 'state event type', TRAN 'transition event type', V2 'third-person medial invisible', VER 'verum focus', VF 'volunteered form', WH 'indefinite interrogative root'. Round brackets '( )' are placed around optional forms within examples.

[2] The suffix *-saẃ/-su'* is realized as *-saẃ* before vowels and as *-su'* elsewhere.

(1) du<u>k</u>w<u>a</u>li   Ted   x̱a   tⱡaẏi.
    du<u>k</u>w-<u>a</u>la   =i   Ted   =x̱=a   tⱡaẏi
    see-PROC   =D3   Ted   =ACC=D4   bear
    'Ted saw a bear.'   (20230320-VB VF)

(2) du<u>k</u>w<u>a</u>la**sa̱ẇ**ida   tⱡaẏi.
    du<u>k</u>w-<u>a</u>la-**sa̱ẇ**   =i=da   tⱡaẏi
    see-PROC-**N.VOICE**   =D3=OST   bear
    'A bear was seen.'   (20230320-VB VF)

(3) tⱡeẏida   du<u>k</u>w<u>a</u>la**sa̱ẇ**e'si   Ted.
    tⱡaẏi   =i=da   du<u>k</u>w-<u>a</u>la-**sa̱ẇ**   =e'   =s=i   Ted
    bear   =D3=OST   see-PROC-**N.VOICE**   =I3   =3.POSS=D3   Ted
    'What was seen by Ted is a bear.'   (20230320-VB JF)

(4) ṁasi   du<u>k</u>w<u>a</u>la**sa̱ẇ**e's   Ted.
    ṁas   =i   du<u>k</u>w-<u>a</u>la-**sa̱ẇ**   =e'   =s=i   Ted
    be.what   =D3   see-PROC-**N.VOICE**   =I3   =3.POSS=D3   Ted
    'What did Ted see?'   (20230320-VB VF)

(5) heṁida   tⱡaẏi   (du<u>k</u>w<u>a</u>la**su**'s   Ted).
    he   ='m=i=da   tⱡaẏi   du<u>k</u>w-<u>a</u>la-**sa̱ẇ**   =s   Ted
    be.D3   =VER=D3=OST   bear   see-PROC-**N.VOICE**   =3.POSS   Ted
    'It's a bear (that Ted saw).'   (20230320-VB VF)

(6) du<u>k</u>w<u>a</u>la**su**'nukwi   Ted.
    du<u>k</u>w-<u>a</u>la-**sa̱ẇ**-nukw   =i   Ted
    see-PROC-**N.VOICE**-have   =D3   Ted
    'Ted saw something.'   (20230320-VB JF)

Voice morphemes fall into two categories, the outer and inner voice morphemes, depending on where in the word they attach (Littell 2016:509). The *outer voice morphemes* attach outside of (after, to the right of) event type suffixes {*-aⱡa* 'state', *-a̱la* 'process', *-(x)'id* 'transition', *-a* 'default final vowel'}, while the *inner voice morphemes* attach to the inside of (before, to the left of) these same suffixes.[3] Voice morphemes are listed in Table 1. Notice that (at least) two voice morphemes belong to both categories: *-ayu/-ᵥₐyu* and *-'as/-ᵥ'as*.

Table 1: Voice Morphemes

Outer	*-ayu, -sa̱ẇ/-su', -'as, =giⱡ*
Inner	*-ᵥayu, -ᵥa̱m, -ᵥana̱m, -ᵥkw, -ᵥⱡ, -ᵥ'as*

The voice morphemes, together with the grammatical rules that give rise to the sentence types shown in (2) to (6), constitute the Kwak̓wala *voice system*.

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3 The inner voice morphemes all trigger weakening consonant mutation (*-ᵥ*) in the stem to which they attach.

Previous analyses focusing on the Kwak'wala voice system include Levine (1978, 1980, 1981, 1984), Anderson (1984), Sherer (2014), and Rosenblum (2013), with additional description and analysis of the system in Boas (1911, 1947), Littell (2016), and Sardinha (2017). Throughout this literature, two characteristics of the voice morphemes have been emphasized, namely their status as nominalizers and their resemblance to passives. I follow Sherer (2014) here in adopting the term *voice morphemes* to refer to them, finding that alternative labels turn out to be either too narrow in meaning to capture their various uses ("passives", "focus markers"), or too wide in meaning to characterize them uniquely ("nominalizers").

The purpose of this paper is to put forward a new perspective on the role of the voice system within Kwak'wala grammar. First, I will provide a concise overview of the five voice constructions, using updated terminology and a carefully sequenced set of minimally contrastive datasets.[4] Then, I will present a holistic view of the voice system as a grammatical system for expressing indefinite arguments within initiated events. Whereas in English, indefinite arguments are expressed using indefinite and relative pronouns, in Kwak'wala they are expressed grammatically, using voice morphemes to derive event nominalizations.

Section 2 introduces the terminology that will be used to analyze the voice system in this paper. Section 3 provides a brief overview of the five voice constructions previewed above, with data involving the outer voice morphemes. Section 4 extends the overview in Section 3 to account for the grammar of inner voice morphemes. Section 5 discusses the role of the voice system in Kwak'wala grammar more generally.

2 Background terminology

When we talk about the *form* of a word or sentence, we are talking about its parts, and how these parts fit together into larger structures. Each part of a word or sentence, in turn, has a *meaning*. Forms and meanings are in correspondence with each other, so that when forms are combined into larger structural units, they come to express larger units of meaning. Whole sentences express complete thoughts, which acquire additional meaning from the contexts they are spoken in.

In terms of its form, the sentence in (7a) has been broken into two parts in (7b): the *predicate* and the *subject*. In terms of meaning, the predicate *luxwilela* 'to roll around' refers to an *event*, and more specifically to a 'rolling-around' event. The subject, *=uxda dzamidzamix* 'the cat (medial distance, visible)', refers to a *participant* in this event—the one who does the rolling around (the 'roller'). In Kwak'wala sentences, the predicate typically precedes the subject.[5] The subject is what the sentence is about, while the predicate provides new information about the subject.

(7) a. luxwileluxda   dzamidzamix.
         luxw-ₑylẏ-ala   =ux=da   dzamidzami   =(a)x
         roll-here.and.there-PROC   =D2=OST   cat   =v2
         'That cat is rolling around.'   (20231020-VB VF)

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[4] The overview of the Kwak'wala voice system presented here is a simplified and abbreviated version of "*Module 3: The Kwak'wala Voice System*", a module within a course on Kwak'wala sentence structure in development by the author. Feedback obtained at the ICSNL will be used to improve the course.

[5] Unless one or more auxiliaries are present, or in certain marked discourse situations.

b.   *luxwilel*   *=uxda dzamidzamix*
     Form: predicate   subject
     Meaning: event ('rolling-around') event participant ('roller')

The sentence in (7) consists of one *clause* (i.e., it has no *embedded* or *subordinate clauses*). The predicate does not contain a voice morpheme, so we classify it as an *active clause*.

     The subject in (7) is also an *argument* of the predicate. Arguments come in different types (of which the *subject* is one), and predicates can have multiple arguments. In Kwak'wala, arguments come in five types, called *grammatical roles*, which are differentiated on the basis of word order and morphological marking. The five grammatical roles include: subjects, instrumental (=*s*) objects, accusative (=*x*) objects, *la*-phrases, and *ka*-phrases. They are illustrated (in the above order) within active clauses in (8) to (11), where predicates are left unmarked, subjects are underlined, and argument types other than the subject are in **bold**.

(8)   <u>gals</u>i   <u>Monica</u>   **sa**   **tɬaxwstu**   **galyayu**.
         gals   =i   <u>Monica</u>   **=s=a**   **tɬaxw-(')stu**   **gals-wayu**
         paint   =D3   Monica   **=INST=D4**   **red-in.eye**   **paint-I.VOICE**
         '<u>Monica</u> was painting **with a red paint**.'   (20230320-VB JF)

(9)   <u>k̓ay</u>i   <u>Vickiy(e)</u>   **xa**   **tistak̓wa**.
         k̓a   =i   Vicky   **=x=a**   **tistak̓wa**
         find   =D3   Vicky   **=ACC=D4**   **earring**
         '<u>Vicky</u> found **an earring**.'   (20230320-VB VF)

(10)   <u>k̓waɬ</u>i   <u>James</u> **laxa**   **awiṅa'gwis**.
         k̓wa-aɬa   =i   <u>James</u> **la**   **=x=a**   **awiṅa'gwis**
         sit-STAT   =D3   James   **PREP**   **=ACC=D4**   **land**
         '<u>James</u> is sitting **on the land**.'   (20230321-VB VF)

(11)   <u>wos</u>i   <u>Shelly</u> **ke'eda**   **ẏax'ide'**.
         wos   =i   Shelly **k̓a**   **=i=da**   **ẏak-(x)'id**   **=e'**
         sad   =D3   Shelly **PREP**   **=D3=OST**   **bad-TRAN**   **=I3**
         '<u>Shelly</u> is sad **for the person that passed away**.'   (20230321-VB JF)

In terms of meaning, arguments refer to event participants. Event participants also come in five types, called *event roles*. Many generalizations about Kwak'wala sentence structure can be stated in terms of correspondences between grammatical roles and event roles. The correspondences that hold between these categories in active clauses are summarized in Table 2, along with some notes about how particular event roles are defined.

Table 2: Form-Meaning Correspondences in Active Clauses

Grammatical Role	*Event Role*	*Definitions*
subject	Initiator	doer, agent, cause, natural force
instrumental (=*s*) object	Co-initiator	what the Initiator does the event 'with', instrument, means, non-locational source, emotional stimulus
accusative (=*x̱*) object	Non-initiator	what the Initiator does the event 'to', undergoer, obtainum, object of perception or cognition, target of emotion
la-phrase	Location	location (at...), goal (to...), source (from...)
ḵa-phrase	Reason	past-oriented reason (explanation), future-oriented reason (motivation), benefactive

The events referred to by the predicates in (8) to (11) are all *initiated* events, meaning that they have an Initiator. Not all clauses, however, contain predicates that refer to initiated events. For instance, take (12):

(12)   dẕamidẕamiyux̱da   lux̱wiẏelax̱.
       dẕamidẕami   =ux̱=da   lux̱w-ₑyly̓-a̱la   =(a̱)x̱
       cat   =D2=OST   roll-here.and.there-PROC   =V2
       'The one rolling around is a cat.'   (20231020-VB VF)

The predicate in (12), *dẕamidẕami*, refers to a state of 'being a cat'. Its subject, =*ux̱da lux̱wiẏelax̱* 'the one rolling around (medial distance, visible)', is not understood to have initiated the state of being a cat, but merely exists in this state. Hence, not all predicates refer to initiated events.[6]

Since the voice system is only defined in relation to predicates that refer to initiated events, we will not discuss clauses containing predicates like the one in (12) further here.

3   Voice constructions

In this section, I provide a brief overview of the five voice constructions: passives (Section 3.1), relative clauses (Section 3.2), information questions (Section 3.3), answer clefts (Section 3.4), and antipassives (Section 3.5). The data in this section contain predicates with the outer voice morphemes: *-ayu*, *-sg̱ẇ/-su'*, *-'as*, and =*giɫ*.

Each voice construction is described in three steps: (i) a dataset is provided, including sentences which differ minimally in content from sentences previously shown, but which illustrate a new

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[6] Note that the sentence in (12) is the mirror reversal of (7) above, in terms of which sentence element is expressed as the predicate versus the subject. Sentence pairs of this sort demonstrate the property of predicate-argument flexibility which Kwak̓wala (and all Wakashan languages) are well known for. In Kwak̓wala, basic predication does not necessitate the use of a copular verb 'to be', although equative and cleft constructions do (Littell 2016).

voice construction; (ii) a set of generalizations is stated that characterize the new voice construction; and (iii) additional notes are provided about the voice construction that may go beyond what the dataset strictly shows. Each dataset is meant to be compared and contrasted directly with a preceding dataset, in the manner indicated below.

3.1 Passive

The data in (13) to (16) illustrate four morphological variants of passive clauses. Compare and contrast these sentences with the corresponding active clauses in (8) to (11).

(13) ga̲ls'id**ayu**wida   ƛax̲wstu   ga̲lyayu.
     ga̲ls-(x)'id-**ayu**   =i=da   ƛax̲w-(')stu   ga̲ls-ᵂayu
     paint-TRAN-**C.VOICE**   =D3=OST   red-in.eye   paint-I.VOICE
     'Red paint was painted with.'   (20230320-VB JF)

(14) k̓asa̲w̓ida   tista̲k̓we's   Vicky.
     k̓a-**sa̲w̓**   =i=da   tista̲kwa   =e'=s   Vicky
     find-**N.VOICE**   =D3=OST   earring   =I3=3.POSS Vicky
     'An earring was found by Vicky.'   (20230320-VB VF)

(15) k̓wa̲ƚa̓'**asi**   a̲win̓a'gwise's   (James).
     k̓wa̲-aƚa-**'as**   =i   a̲win̓a'gwis   =e'=s   (James)
     sit-STAT-**L.VOICE**   =D3   land   =I3=3.POSS (James)
     'The ground is being sat on by him (James).'   (20230321-VB JF)

(16) wos'ida**giƚi**   y̓ax'ide's.
     wos-(x)'id-a   **=giƚ**=i   y̓ak-(x)'id   =e'=s
     sad-TRAN-FV   **=R.VOICE**=D3 bad-TRAN   =I3=3.POSS
     'The recently deceased is her reason for getting sad.'   (20230321-VB JF)

Generalizations: The predicate in a passive clause contains a voice morpheme: {*-ayu*, *-sa̲w̓/-su'*, *-'as*, *=giƚ*}, while the subject in a passive clause has an event role other than Initiator. There is a correspondence between the voice morpheme on the predicate and the event role of the subject in a passive clause, such that:

- If *-ayu* is on the predicate, the subject in a passive is a Co-initiator (13).
- If *-sa̲w̓/-su'* is on the predicate, the subject in a passive is a Non-initiator (14).
- If *-'as* is on the predicate, the subject in a passive is a Location (15).
- If *=giƚ* is on the predicate, the subject in a passive is a Reason (16).

The Initiator in a passive clause can be *overt* (expressed) or *covert* (unpronounced but present as part of the meaning of the sentence). If the Initiator is overt, it is grammatically expressed as a possessor and introduced with possessive morphology.[7] If the Initiator is covert and its identity is

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[7] In (14) to (16), this is done by the third-person non-reflexive possessive clitic *=s*. These sentences are technically ambiguous between two readings: one where *=s* introduces the Initiator, and one where it

unknown in context, it is interpreted as indefinite. For instance, an alternative translation for (13) is "They painted with red paint", where "they" refers to whoever did the painting, known or unknown.

Additional Notes: One function of the passive in discourse is that it enables the foregrounding of an event participant other than the Initiator, while still referring to an event that is understood to have been initiated. Even when the Initiator is overtly expressed in the passive, it is interpreted as backgrounded relative to the foregrounded subject (Rosenblum 2013).

The second function of the passive is that it enables the expression of an indefinite Initiator.

3.2 Relative clauses

The data in (17) to (21) illustrate five morphological variants of relative clauses, all in subject position. Compare and contrast (17) to (20) with the corresponding passive clauses in (13) to (16).

(17)   ƛax̱wstuwida   g̱als'id**ayu**we's.
        ƛax̱w-(')stu   =i=da   g̱als-(x)'id-**ayu**   =e'=s
        red-in.eye   =D3=OST   paint-TRAN-**C.VOICE** =I3=3.POSS
        'What she painted with was red.'   (20230320-VB JF)

(18)   tistak̓wi   ḵas**a**w̓e's   Vicky.
        tistak̓wa   =i   ḵa-**s**a**w̓**   =e'=s   Vicky
        earring   =D3   find-**N.VOICE** =I3=3.POSS Vicky
        'What Vicky found was an earring.'   (20230320-VB VF)

(19)   a̱win̓a'gwisida   k̓wa̱ł**a'as**e's.
        a̱win̓a'gwis   =i=da   k̓wa̱-ała-**'as**   =e'=s
        land   =D3=OST   sit-STAT-**L.VOICE** =I3=3.POSS
        'Where he's sitting is the ground.'   (20230321-VB JF)

(20)   y̓ax'idey̓ida   wos'ida**g̱ił**e's.
        y̓ak-(x)'id   =e'   =i=da   wos-(x)'id-a **=g̱il**=e'=s
        bad-TRAN   =I3   =D3=OST   sad-TRAN-FV **=R.VOICE**=I3=3.POSS
        'Her reason for getting sad is recently deceased.'   (20230321-VB JF)

(21)   iksukwida   ka̱lxwa x̱a   ƛa̱ta̱mł.
        iksukw   =i=da   ka̱lxw-a =x̱=a   ƛa̱ta̱mł
        good.looking =D3=OST   buy-FV =ACC=D4 hat
        'The one who bought a hat is handsome.'   (20240408-VB JF)

Generalizations: Compared with the passives in (13) to (16), the sentences in (17) to (21) are mirrored in terms of which sentence element is expressed as the predicate and which is expressed as the subject.

Like other subjects we have seen in earlier datasets, the relative clauses in the dataset above immediately follow the predicate in the sentence, and their first element consists of a prenominal

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introduces a possessor of the subject nominal (e.g., 'An earring was found by Vicky' versus 'Vicky's earring was found' in 14). I will ignore this ambiguity in the rest of this paper.

determiner or determiner string (=*i*, =*i*=*da*). Unlike other arguments we have seen, however, relative clauses resemble clauses, in that they contain a predicate which in turn has its own understood subject. In other words, a relative clause is a type of *subordinate* (or *embedded*) *clause* which behaves as a nominal within its containing clause.

With the exception of (21), the predicate within the relative clauses above contains a voice morpheme. The understood subject of these relative-clause-internal predicates has an event role which corresponds with the voice morpheme on the predicate, so that:

- If the relative clause predicate contains -*ayu*, its understood <u>subject</u> is a Co-initiator (17): '<u>what</u> she painted with'.
- If the relative clause predicate contains -*sǥw̓/-su'*, its <u>subject</u> is a Non-initiator (18): '<u>what</u> Vicky found'.
- If the relative clause predicate contains -*'as*, its <u>subject</u> is a Location (19): '<u>where</u> he is sitting'.
- If the relative clause predicate contains =*giɬ*, its <u>subject</u> is a Reason (20): '<u>the reason</u> she got sad'.
- If there is no voice morpheme on the relative clause predicate, and the predicate refers to an initiated event, its <u>subject</u> is an Initiator (21): '<u>the one</u> who bought a hat'.

Relative clauses are a grammatical mechanism for creating nominal phrases that refer to particular event participants. For instance, the relative clause =*ida ǥals'idayuwe's* 'what she painted with' in (17) refers to a Co-initiator in a painting event that was carried out by a third-person (=*s* 'by her').

Additional Notes: Just like in passive clauses, in relative clauses with predicates containing voice morphemes, the Initiator can be either overt and expressed as a possessor, or covert and interpreted as indefinite.

Note that the English counterparts of the relative clauses in (17) to (21) contain relative pronouns, like 'what', 'where', and 'who', or indefinite pronouns like 'one'. In Kwak̓wala, there are no lexical counterparts of these pronouns. However, we can think of Kwak'wala as having silent (covert) pronouns in the position indicated in (22) below ('∅'), which have approximately the same meaning as the <u>underlined</u> portion of the translations associated with these phrases:

(22) a. =ida ∅ ǥals'idayuwe's   '<u>the thing/stuff</u> she painted with'
       b. =i ∅ k̓asa̱w̓e's Vicky   '<u>the one</u> Vicky found'
       c. =ida ∅ k̓wała̱'ase's   '<u>the place</u> he is sitting at'
       d. =ida ∅ wos'idagiłe's   '<u>the reason</u> she is sad'
       e. =ida ∅ ka̱lxwa x̱a tła̱ta̱mł   '<u>the one</u> who bought a hat'

Evidence for these silent pronouns comes from the observation that they can be replaced by nouns. Thus, example (23) contains a subject relative clause in which the noun *ba̱gwana̱m* 'man' takes the place occupied by '∅' in (21).

(23) iksukwida   **ba̱gwana̱m**   ka̱lxwa   x̱a   tła̱ta̱mł.
      iksukw   =i=da   **ba̱gwana̱m**   ka̱lxw-a   =x̱=a   tła̱ta̱mł
      good.looking   =D3=OST   **man**   buy-FV   =ACC=D4   hat
      'The **man** who bought a hat is handsome.'   (20240408-VB VF)

The noun *bəgwanəm* 'man' in (23) is called the *head* of the relative clause. Relative clauses with nominal heads are called *headed relative clauses*, while those with silent pronouns are called *headless relative clauses*. In Kwak'wala, headless relative clauses are more common than headed ones (Littell 2016:602).

Though the dataset above only contains relative clauses in subject position, relative clauses are arguments, and as such, can be expressed as any grammatical role (subject, instrumental object, accusative object, *la*-phrase, or *ḵa*-phrase). For instance, example (24) contains a headed relative clause (in **bold**) with the grammatical role of accusative (=x̱) object.

(24)   *Context: MC is describing the actions of a crow-mother, who came to MC's porch to eat some food she had left out there.*

lida		abampgas		wax	ḵas	
la̱	=i=da	aba̱mp	=gas	wak	ḵa	=(i')s
AUX	=D3=OST	mother	=poor.thing	try	PREP	=3.REFL.POSS

ha̱m̓x'ide'		**x̱ada**	**ḵuta̱la, ḵasu'**	
ha̱m̓-(x)'id	=a=i'	**=x̱=a=da**	ḵuta̱la	ḵa-sa̱w̓
eat-TRAN	=EMB=NMZ	**=ACC=D4=OST**	fish	find-N.VOICE

laxa	**t̓łasano̱y̓i**.	
la	**=x̱=a**	t̓łasano̱y̓i
PREP	**=ACC=D4**	**outside**

'Then the poor mother tried to eat **the fish that was found outside**.'   (20160722-MC VF)

3.3   Information questions

The data in (25) to (30) illustrate six morphological variants of information questions. Compare and contrast these sentences with the sentences in (17) to (21) that contain relative clause subjects.

(25)
m̓asida	ga̱ls'id**ayu**we's		Monica?
m̓as	=i=da	ga̱ls-(x)'id-**ayu**	=e'=s	Monica
be.what	=D3=OST	paint-TRAN-**C.VOICE**	=I3=3.POSS	Monica

'What did Monica paint with?'   (20230320-VB JF)

(26)
m̓asi	ḵasa̱w̓e'sux̱		Vickyax̱?
m̓as	=i	ḵa-**sa̱w̓**	=e'=s=ux̱	Vicky =ax̱
be.what	=D3	find-**N.VOICE**	=I3=3.POSS=D2	Vicky =V2

'What did Vicky find?'   (20230320-VB VF)

(27)
w̓idida	k̓wa̱ła**'as**e's?	
w̓a̱y	=d=i=da	k̓wa̱-ała-**'as**	=e'=s
WH	=DET=D3=OST	sit-STAT-**L.VOICE**	=I3=3.POSS

'Where is he sitting?'   (20230321-VB JF)

(28)
m̓asida	wos'ida**gi̱l**e's?	
m̓as	=i=da	wos-(x)'id-a	**=gi̱l**=e'=s
be.what	=D3=OST	sad-TRAN-FV	**=R.VOICE**=I3=3.POSS

'What did she feel sorry/sad about?'   (20230321-VB JF)

(29) angwida   kalxwa   xa   tłatamł?
      angwa =i=da   kalxw-a   =x̱=a   tłatamł
      be.who =D3=OST   buy-FV   =ACC=D4   hat
      'Who bought a hat?'   (20240408-VB VF)

(30) angwux̱da   bagwanam?
      angwa =ux̱=da   bagwanam
      be.who =D2=OST   man
      'Who is that man?'   (Littell 2016:610)

Generalizations: Information questions are used to request information about the identity of a particular entity (or entities). A comparison of the sentences in (17) to (21) with the information questions in (25) to (30) reveals that in Kwak̓wala, interrogative words are predicates. In this dataset, we see examples of three interrogative predicates: *m̓as* 'to be what', *w̓i* 'to be where',[8] and *angwa* 'to be who'.

The entity that is targeted for identification by an information question is expressed in Kwak̓wala as the subject of an interrogative predicate. Minimally, this entity is expressed as a simple noun phrase, as shown in (30). In order to target an entity who is a participant in an initiated event, a relative clause can be constructed, in which case we see the same set of correspondences appearing as seen in other relative clauses:

- If the relative clause predicate contains -*ayu*, the entity targeted by the question is a Co-initiator.
- If the relative clause predicate contains -*sgw̓/-su'*, the entity targeted by the question is a Non-initiator.
- If the relative clause predicate contains -*'as*, the entity targeted by the question is a Location.
- If the relative clause predicate contains =*gił*, the entity targeted by the question is a Reason.
- If there is no voice suffix on the relative clause predicate, and the predicate refers to an initiated event, the entity targeted by the question is an Initiator.

Additional Notes: Though the dataset above shows only headless relative clauses expressed as the subject of an interrogative predicate, headed relative clauses are possible here too.

When the relative clause predicate within an information question contains a voice morpheme, the Initiator can be either overt or covert. When overt, Initiators are expressed as grammatical possessors.

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[8] The interrogative predicate *w̓i/w̓ay* in fact has a very general, indefinite interrogative meaning, more akin to 'what happened (in a place, at a time)'. It is also used to ask questions about manner ('how'), and can have its meaning modified by various suffixes and clitics.

3.4 Answer clefts

The data in (31) to (35) illustrate five morphological variants of answer clefts. Compare and contrast these sentences with the corresponding information questions in (25) to (29), to which these answer clefts constitute possible answers.

(31) heṁida   tłax̱wstu   g̱alyayu
      he   =ʼm=i=da tłax̱w-(ʼ)stu g̱als-ₓayu
      be.D3   =VER=D3=OST red-in.eye   paint-I.VOICE

          (g̱als'id**ayu**we's   Monica).
          (g̱als-(x)'id-**ayu**   =e'=s   Monica)
          (paint-TRAN-**C.VOICE**   =I3=3.POSS   Monica)
      'It was red paint (that Monica painted with).'   (20230320-VB JF)

(32) heṁida   tistak̓wa   (k̠asa̱w̓e's   Vicky).
      he   =ʼm=i=da   tistak̓wa   (k̠a-sa̱w̓   =e'=s   Vicky)
      be.D3   =VER=D3=OST earring   (find-**N.VOICE** =I3=3.POSS   Vicky)
      'It's an earring (that Vicky found).'   (20230320-VB VF)

(33) heṁida   awiṅa'gwis   (k̓wała̱'ase's).
      he   =ʼm=i=da   awiṅa'gwis   (k̓wa̱-ała-**'as**   =e'=s)
      be.D3   =VER=D3=OST land   (sit-STAT-**L.VOICE**   =I3=3.POSS)
      'It's the ground (that is where he's sitting).'   (20230321-VB JF)

(34) heṁida   dagwada   (wos'ida**gił**e's).
      he   =ʼm=i=da   dagwada   (wos-(x)'id-a   **=gił**=e'=s)
      be.D3   =VER=D3=OST doctor   (sad-TRAN-FV   **=R.VOICE**=I3=3.POSS)
      'It's the doctor (she's sorry for).'   (20230321-VB JF)

(35) hedida   bagwana̱m   (ḵalxwa   x̱a   tłata̱mł).
      he   =d=i=da   bagwana̱m   (ḵalxw-a   =x̱=a   tłata̱mł)
      be.D3   =DET=D3=OST man   (buy-FV   =ACC=D4   hat)
      'It's that man (who bought a hat).'   (20240408-VB VF)

Generalizations: Answer clefts are a common way of answering information questions. The answer clefts in this dataset all contain the predicate *he* 'to be', a copular (linking) verb that is used when the subject of a clause is third-person and distal (relative to the speaker). The predicate also contains either =*ʼm*, the verum focus marker, or =*d*. There is no consensus on what the meaning difference is between =*ʼm* versus =*d* in this context, though some useful observations on this topic are provided in Littell (2016:111–112).

The subject of an answer cleft looks like a headed relative clause. However, these headless relative clauses differ from the ones introduced in Section 3.2 in the following way: in an answer cleft, it is not the head of the relative clause which either is or is not pronounced (as in headed versus headless relative clauses); rather, it is the phrase which modifies the head that either is or is not pronounced. In order to refer to the parts of a headed relative clause, new terminology is needed. Following Littell (2016:124–128), I refer to the modifying phrase in answer clefts as the *remnant*.

The form of answer clefts can then be summarized using the schema in (36) (note that the subscript 'i' indicates coreference):

(36)   **Answer clefts schema:**

he{='m, =d}   head$_i$ (remnant)$_i$
predicate   subject (adjunct)

In answer clefts, it is the head that constitutes an answer to the question that was asked. This is because it is the head that provides the new information that was requested in the question. Crucially however, the event role that the head is interpreted to have depends on the voice status of the predicate within the remnant, whether or not the remnant is pronounced. The same set of correspondences between voice morphemes in the remnant and the event role of answer cleft subjects occurs here as in other voice constructions:

- If the remant (overt or covert) contains a predicate with *-ayu*, the subject of the answer cleft is a Co-initiator.
- If the remnant (overt or covert) contains a predicate with *-sạẁ/-su'*, the subject of the answer cleft is a Non-initiator.
- If the remnant (overt or covert) contains a predicate with *-'as*, the subject of the answer cleft is a Location.
- If the remnant (overt or covert) contains a predicate with *=giɬ*, the subject of the answer cleft is a Reason.
- If the remnant (overt or covert) contains a predicate with no voice morpheme and refers to an initiated event, the subject of the answer cleft is an Initiator.

Whereas the head constitutes an answer to the question that was asked, the remnant merely repeats information that was present in the question. The remnant is therefore redundant. As such, it is often omitted in spoken discourse. Note that the copular predicate itself does not take voice morphology; it is the remnant (whether pronounced or not) which signals the event role of the subject.

Additional Notes: Other forms of the copula found in answer clefts include *nugwa* 'to be (first-person)', *su* 'to be (second-person)', *ga* 'to be (third-person proximal)', and *yu* 'to be (third-person medial)'.

While it is not explicitly shown in this dataset, the Initiator in answer clefts can be overt or covert (and interpreted as indefinite), as in other voice constructions.

3.5   Antipassives

The data in (37) to (40) illustrate three morphological variants of antipassives, one of which is ungrammatical. Compare and contrast these sentences with the corresponding active clauses in (8) to (11).

(37)   gạls'id**ayu**nukwi.
        gạls-(x)'id**-ayu**-nukw   =i
        paint-TRAN**-C.VOICE**-have   =D3
        'She painted with something.'   (20230320-VB JF)

(38) k̓asu'nukwi   Vicky.
      k̓a-**sa̱w̓**-nukw   =i   Vicky
      find-**N.VOICE**-have   =D3   Vicky
      'Vicky found something.'   (20230320-VB JF)

(39) k̓wała̱**'as**nukwi   James.
      k̓wa̱-ała-**'as**-nukw   =i   James
      sit-STAT-**L.VOICE**-have =D3   James
      'James is sitting on something.'   (20230321-VB JF)

(40) *ha̱la̱ka̱**gił**nukwi   Shelly.
      ha̱la̱k̲-a **=gił**-nukw   =i   Shelly
      pay-FV **=R.VOICE**-have =D3   Shelly
      Intended: 'Shelly is paying for something/some reason.'   (20230321-VB JF)

Generalizations: Antipassives are used to assert the existence of indefinite event participants other than Initiators. Like in active clauses, the subject of an antipassive is an Initiator. Unlike in active clauses, however, the predicate contains a voice morpheme. The voice morpheme is then followed by the suffix *-nukw*. The voice morpheme on the predicate corresponds with the event role of the indefinite argument, so that:

- If the predicate contains *-ayu* followed by *-nukw*, the event is interpreted as having an indefinite Co-initiator.
- If the predicate contains *-sa̱w̓/-su'* followed by *-nukw*, the event is interpreted as having an indefinite Non-initiator.
- If the predicate contains *-'as* followed by *-nukw*, the event is interpreted as having an indefininte Location.
- Predicates containing *=gił* followed by *-nukw* are ungrammatical.

Additional Notes: Kwak̓wala speakers find attempts to construct antipassives with *=gił* ungrammatical, or marginal at best (Sherer 2014, also my data). This is probably because *=gił* patterns as a second-position clitic, as shown by its appearance on the auxiliary *tłuma* 'really, very, too much' in (41). Clitics always follow suffixes within Kwak̓wala words, so this could explain why it cannot appear before *-nukw* in (40).[9]

(41) *Context: Bill is a greedy person.*
      m̓adzi   tłuma**gił**a'sux̱   a̱wa̱lk̲asa?
      m̓as   =dzo=i   tłum-a **=gił**=a'=s=ux̱   a̱wa̱lk̲as-a
      be.what=AUG=D3   very-FV**=R.VOICE**=I3=3.POSS=D2   greedy-FV
      'Why is he so greedy?'   (20150717-JN VF)

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[9]Historically at least, *-gił* did pattern as an inner voice suffix which occasionally lost its initial consonant (e.g., *-(g)ił*). I have run into its use as a suffix a few times (e.g., *wosił* 'sad-reason', speaker JN).

3.6 Summary: correspondences

Across the five voice constructions examined in this section, we've seen that particular voice morphemes are in correspondence with particular event roles. These correspondences are summarized in Table 3:

Table 3: Voice system correspondences

Voice Morpheme	Event Role
-ayu	Co-initiator
-saẁ/-su'	Non-initiator
-'as	Location
=giɫ	Reason

Within passives and relative clauses (as well as information questions and answer clefts, which contain relative clauses), the argument that receives the event role corresponding with the voice morpheme on the predicate is a subject. Within antipassives, it is a non-subject argument that receives the corresponding event role.

4 The inner voice system

The inner voice morphemes are more restricted in their distribution than the outer voice morphemes. Whereas the outer voice morphemes correspond with particular event roles, inner voice morphemes correspond with particular *thematic roles* that are proper subsets of event roles. These correspondences are summarized in Table 4 below, alongside example nominalizations.

Table 4: Inner voice morphemes

Morpheme	Event Role	Thematic Role	Example
-ₘayu	Co-initiator	instrument	ḱidayu 'fishing rod' (√ḱit 'to fish with rod')
-ₘam	Co-initiator	mental content, instrument	ka̲la̲m 'feared one' (√ka̲ɫ 'to fear')
-ₘana̲m	Non-initiator	obtainum	ka̲lwana̲m 'bought goods' (√ka̲lxw 'to buy')
-ₘ(a̲)kw	Non-initiator	result	kwa̲nikw 'bread' (√kwa̲ns 'to bake bread')
-ₘɫ	Non-initiator	stimulus	dugwa̲ɫ 'seen one' (√duḵw 'to see')
-ₘ'as	Location	place	xa̲ldas 'sawing place' (√xa̲lt 'to saw')

For example, nouns derived with -ₘana̲m refer specifically to things that are obtained in the course of an event. This is a proper subset of the much wider class of Non-initiators.

In general, any predicate containing an inner voice morpheme can be substituted with a predicate containing the outer morpheme with the same corresponding event role. For instance, the word *ḵalwanm̲* 'bought goods' can in general be replaced with *ḵalxwasu'* 'what was bought'. Substitution in the other direction (of predicates with outer voice morphemes by predicates with inner ones) is not always possible, however, since words containing inner voice morphemes have more specific meanings.

5 Discussion

In order to understand the role of the voice system in Kwak̓wala grammar, it helps us to consider some specific ways in which the grammar and lexicon of Kwak̓wala and English differ.

In English, when you want to express an indefinite argument, there are a wide array of lexical means for doing so. For instance, English has a large set of *indefinite pronouns* (*someone*, *somebody*, *anyone*, *anybody*, *nobody*, etc.), and *relative pronouns* (*who*, *which*, *what*, *how*, *whose*, *that*, *whichever*, etc.) for this purpose (42) to (43).

(42) a. <u>Somebody</u> ate the last piece of cake.   *indefinite Initiator*
      b. Jo saw <u>something</u> behind the house.   *indefinite Non-initiator*
      c. Jo is out fishing <u>somewhere</u>.   *indefinite Location*

(43) a. <u>Whoever</u> is cooking needs to be careful.   *indefinite Initiator*
      b. Jo found <u>what</u> she lost.   *indefinite Non-initiator*
      c. Jo knows <u>where</u> the bears live.   *indefinite Location*

Significantly, the roots of these indefinite words are nominal. To express an indefinite argument in English, then, an indefinite noun is simply expressed in an argument position.[10]

When Kwak̓wala speakers are asked to translate English sentences containing one or more indefinite arguments, they are forced to confront the fact that there are no simple, one-word translational equivalents of the indefinite pronouns and relative pronouns in (42) to (43) above. Perhaps the closest approximation to an indefinite pronoun in Kwak̓wala is the nominalization *ax̲e'*, which is formed from the empty root √*ax̲* (44).

(44) *Context: You wake up to a strange noise coming from the other side of your apartment.*
      You run out and see that there is a horse standing in your kitchen!

gudan**ox̲da**	**ax̲e'x̲**			lax̲an's	
gudan =ox̲=da	**ax̲**	=e'=(a)x̲		la	=x̲=an's
horse =D2=OST	**EMPTY.ROOT**	=NMZ=V2		PREP	=ACC=1.PL.INCL

      ham̓iksila̲'as.
      ham̓iksil-'as
      make.food-L.VOICE
      'There is a horse in our kitchen!'   (20130111-RDC VF)
      Lit. '**The doing-one** in our kitchen is a horse!'

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[10] It may subsequently become displaced from its base-generated position in the sentence, through movement.

Nevertheless, such uses of *axe'* are extremely restricted. They are only volunteered in subject position, and with predicates that refer to non-initiated events. In short, the restricted nature of *axe'* demonstrates that it is not a translational equivalent of 'someone' or 'something' in Kwak̓wala.

In Kwak̓wala, rather, it is the voice system which is used to express indefinite arguments (within initiated events). Particular voice constructions enable the expression of particular kinds of indefinite arguments, namely:

- *Passives* enable the expression of indefinite Initiators; this is achieved by leaving the Initiator covert.
- *Relative clauses* enable the expression of indefinite arguments which are identifiable in terms of their event role. Typically, these are *specific indefinites* ('the one that…', 'the thing that…', 'the place that…', etc.).
- *Antipassives* are used to assert the existence of an indefinite Co-initiator, Non-initiator, or Location in an initiated event.

The reason that there are no single-word translational equivalents of English indefinite and relative pronouns in Kwak̓wala is that indefinite noun phrases are created 'on the fly' in this language, using voice morphemes to derive event nominalizations. Since the Kwak̓wala voice system requires indefinites to be classified, morphosemantically, in terms of their event role, there can be no simple, one-word indefinites like 'someone' in Kwak̓wala. Instead, there is an array of constructions referring to 'someone', each one classified by its event role.

Recall that in English, indefinite and relative pronouns are nominal. In Kwak̓wala, on the other hand, roots with indefinite meanings are exclusively verbal. Common examples of indefinite verbal roots include the interrogative predicates (e.g., *m̓as* 'to be what', *angwa* 'to be who', *angwas* 'to be whose', *ẇay/ẇi* 'what happened, how, where, when', *gans* 'how much') as well as a variety of indefinite verbs (e.g., *gway/gwi* 'to do thusly', *ax* 'to do', *o* 'so, just'), all of which can be modified by various suffixes and/or clitics. The verbal nature of indefinite roots in Kwak̓wala is significant, because it means that in order to express an indefinite in argument position, one must be derived, through nominalization. Hence, the Kwak̓wala lexicon is endowed with a large set of nominalizing suffixes and clitics. Among this large set of nominalizers, the ones which make up the voice system are just those ones that attach to predicates that denote initiated events, thus deriving event nominals. Thus, it is the fact that indefinite roots are verbal in Kwak̓wala which functions to shape the voice system into a system of nominalizers.

Many details remain to be worked out related to the expression of indefinite arguments in Kwak̓wala. For instance, there are many unanswered questions concerning the relationship between the voice system and the DP system. Nevertheless, I have showed that the Kwak̓wala voice system is not just a constellation of related sentence types, unified by a set of morphemes or derivational operations. It is also a system for expressing indefinite event participants in initiated events. Having another way of thinking about the role of the voice system in Kwak̓wala grammar can guide us to new questions for further research, and help shape how we go about teaching the voice system to Kwak̓wala learners.

It is often said that languages don't differ in terms of *what* ideas they can express, while they can differ profoundly in terms of *how* they express ideas. The expression of indefinites in English and Kwak̓wala exemplify this principle: in English, indefinites are underlyingly nominal, while in Kwak̓wala, indefinites are underlyingly verbal. Consequently, English expresses indefinite arguments by placing indefinite nominals in argument positions, while Kwak̓wala expresses

indefinite arguments by deriving event nominals that are classified, morphosemantically, according to their event role. Both grammatical systems achieve the same meanings, but they do so in mirror-opposite ways.

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