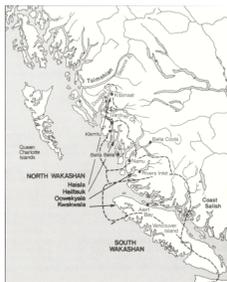# KWAK'WALA MODALITY

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Objective

To present an analysis of how the Kwak'wala modal system is organized based on modal force and conversational background.

Language

Kwak'wala belongs to the Northern branch of the Wakashan language family. It is spoken by the Kwakwaka'wakw people of Vancouver Island and the adjacent mainland. The following data is from my own elicitations with a consultant originally from Kingcome Inlet.

Modal Logic

Modals are quantifiers that quantify over possible worlds. (Kratzer 1977,1981)
▪ The meaning of modal expressions is composed from the interaction between modal force and conversational background

Modal Force:

▪A proposition that is necessarily true is true in all worlds quantified over

▪A proposition that is possibly true may or may not be true, given the facts, but it is not necessarily false

□ = ∀
□p = it is necessary that p

◇ = ∃
◇p = it is possible that p

Conversational Background:

▪ Conversational background restricts the possible set of worlds to those compatible with the modal type (Kaufmann 2006)
▪ A basic distinction is made between epistemic and deontic modal types

Epistemic
Compatible with the speaker's knowledge or evidence

Deontic
Compatible with what is required or allowed according to the rules of the situation

Cross-Linguistic Variation

The interaction between modal force and type varies across languages

English

	EPISTEMIC	DEONTIC
NECESSITY	Must	Must
POSSIBILITY	May	May

Modal force is encoded in the lexicon and the modal type is variable and dependent on context

St'at'imcets

	EPISTEMIC	DEONTIC
NECESSITY	k'a	ka
POSSIBILITY	k'a	ka

Modal force is variable and the Modal type is fixed and encoded in the lexicon (Rullmann et al. 2008)

There are four possible modal distributions based on the interaction between modal force and modal type

	Fixed Modal Type	Variable Modal Type
Fixed Modal Force	Javanese (Vander Klok 2008)	English
Variable Modal Force	St'át'imcets	?

Research Question: How is the Kwak'wala modal system organized based on the two parameters modal force and modal type?

Kwak'wala Modals

Not only is there variation across languages with respect to the interaction between modal force and modal type, but Kwak'wala shows that there is also language internal variation.

▪The epistemic modal **χant** appears to have a variable modal force reading, being felicitous in both possibility and necessity contexts. The type of evidence available, like direct sensory evidence or indirect evidence based on previous knowledge, determines the modal force of **χant**. (Peterson 2009)

▪**tsimasi** appears to have variable conversational background and a necessity modal force. It is felicitous in both deontic and epistemic conversational backgrounds.

	EPISTEMIC	DEONTIC
NECESSITY	tsimasi χant	tsimasi
POSSIBILITY	gʸanem χant	wɛɬ

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Deontic Modals

Kwak'wala has one dedicated deontic possibility modal with fixed modal force and a fixed modal type (**wɛɬ**) There is also a weak necessity modal with deontic readings (**tsimasi**)

POSSIBILITY- wɛɬ

Context: You want to feed the horses and you ask your mom if you can. Your mom says:

wɛɬ-əm-s	hámgila-χa	gí-gʸudan
DEON.POSS-FOC-2.SG	feed – ACC	RED-horse

'You're allowed to feed the horses'

wɛɬ also expresses ability

▪ **wɛɬ** is infelicitous in epistemic possibility contexts

Context: Sally lives on a farm with her mom and dad. One morning her dad asks where she is.

# wɛɬ-əm	hámgila-χa gí-gʸudan
DEON.POSS-FOC	feed-ACC RED-horses

'She is allowed to feed the horses"

NECESSITY- tsimasi

a. *Context: There is a sign in the employee bathroom telling everyone that they have to wash their hands.*
b. *Context: Because of all the health scares, Heath Canada recommends that everyone should wash their hands after using the restroom.*

wiʔla-**tsimasis**	tsut-oχ	tsana
everyone-DEON.NECESS	wash-2.LOC	hands

"Everyone should/has to wash their hands"

▪ **tsimasi** is, however, felicitous in epistemic necessity contexts
▪ It is unclear if it is really an epistemic reading

Context: Sally does her chores every morning. One of her chores is feeding the horses. Its 7am and Sally's dad asks her mom where Sally is.

hamgil-i-**tsimas**-χa	gí-gʸudan
feed-3.LOC-EPIS.NECESS-ACC	RED-horses

'She's supposed to be feeding the horses'

Epistemic Modals

The following modals have a fixed epistemic modal type

▪**gʸanam** appears to be strictly possibility and is infelicitous in contexts where there is strong inferential evidence available

▪ **χant** is felicitous in both necessity and possibility contexts

POSSIBILITY

Context: Salmon berries grow in the summer. You haven't gone berry picking yet so you don't know if the berries are ripe, but it is summer and they are usually ripe at this time of year.

la	**gʸenamɛ**ʔə	tlup-i-da	qʼʌmdzəkʷ
AUX	EPSI.POSS	ripe-3.LOC-DET	salmon.berries

'The salmon berries might be ripe'

laʔ-əm	**χant**-i	tlup-i-da	qʼʌmdzəkʷ
AUX-FOC	EPIS.NEC- 3.LOC	ripe-3.LOC-DET	salmon.berries

'The salmon berries must be ripe'

NECESSITY

Context: Salmon berries grow in the summer. You look outside and see people walking home with baskets and purple hands.

la	**χant**-i	tlup-i-da	qʼʌmdzəkʷ
AUX EPIS.NEC-3 LOC	ripe-3.LOC-DET	salmon.berries

'The salmon berries must be ripe'

# la-ʔəm	**gʸenamɛ**	tlup-i-da	qʼʌmdzəkʷ
AUX-FOC	EPIS.POSS	ripe-3.LOC.DET	salmon.berries

'The salmon berries might be ripe'

▪ Both **gʸanəm** and **χant** are infelicitous in deontic possibility and necessity contexts

Context: The berries are ripe and Sally asks if she can pick the berries. Her dad says that she is allowed to.

# hɛmsa-**χant**-i	qʼʌmdzəkʷ
pick-EPIS.NECESS-3.LOC	salmon.berries

'She must be picking the salmon berries'

# hemsa-**gʸanem**as-i-χa	qʼʌmdzəkʷ
pick-EPIS.NECESS-3.LOC-ACC	salmon.berries

'She might be picking the salmon berries'

Context: The berries are getting so ripe that they will fall off of their branches soon and will rot on the ground. Sally's dad says that Sally must pick the berries.

# hemsa-**χant**-i	qʼʌmdzəkʷ
pick-EPIS.NECESS-3.LOC	salmon.berries

'She must be picking the salmon berries'

# hemsa-**gʸanem**as-i-χa	qʼʌmdzəkʷ
pick-EPIS.POSS-3.LOC-ACC	salmon.berries

'She might be picking the salmon berries'

Discussion

The Kwak'wala modal system does not fit neatly into a modal typology based on the interaction between modal base and conversational background. Evidence from Kwak'wala shows that there is not only variability in the organization of modal systems across languages but there is also variability within languages. For variable epistemic modals like **χant**, the type of evidence provided determines the modal force. The stronger the inferential evidence the more likely it is that **χant** will be glossed as a necessity modal. More elicitation is needed to explore the variability in the modals presented above. It would also be interesting to explore the idea of a scale of modal force, as some modals seem to make stronger statements than others.

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