

Morphosemantics of Nez Perce modals*

Amy Rose Deal

University of Massachusetts Amherst

SSILA 2008, Chicago

January 5, 2008

Nez Perce: Penutian; Idaho, Washington and Oregon, USA; described by Aoki (1970, 1994), Rude (1985, 1986b, 1986a, 1992, 1997, 1999), Crook (1999)

Modal constructions in Nez Perce have been described previously as "conditional mood" by Aoki (1970, 114-155), Rude (1985, 61-62), Crook (1999, 115-119)

The aim here is to elucidate the range of meanings of Nez Perce modal constructions and to attempt to link this to their morphological form.

1 Epistemic modality

Nez Perce speakers use a variety of optional particles to convey epistemic modality (possibility or necessity in light of what is known). The most common is *pa'ys* 'maybe'/'probably'; also used is *paalwit* 'maybe'/'perhaps'.

- (1) ke-'isí-nm la'am nuku-ne pee-p-s, **pa'ys** hi-tqelek-s
REL-who-ERG all meat-OBJ 3/3-eat-PERFECT maybe 3SUBJ-be.full-PERFECT
Whoever ate all the meat, he is probably full
- (2) **pa'ys** hi-pa-ni-yo' lapata-nm hiyeqt
maybe 3SUBJ-S.PL-make-FUT potato-GEN soup
Maybe they'll make potato soup
- (3) **paalwit** 'ew-yaaqn-o'qa Siminikem-pe
maybe 3OBJ-find-MODAL L-LOC
Maybe you could find him in Lewiston
- (4) kiimet naaqc-ki lehey-ki waaqo' heenek'e iceyeeye ku' mine 'itu
then one-INST day-INST now again coyote UNSURE where what
'ipnée-šeley-ce ipna-laqáaci-sa **paalwit**
3SG.REFL-be.busy-IMPERF 3SG.REFL-catch.mice-IMPERF perhaps
Then one day coyote was again busy doing something for himself, perhaps he was catching mice (Aoki 1994, 505)

* Thanks to Nez Perce teachers Bessie Scott, Florene Davis and Cecil Carter. Fieldwork for this project was supported in part by the National Science Foundation under Grant BCS-0418311 to Barbara H. Partee and Vladimir Borschev.

A further way of indicating epistemic modality is via the particle *ku'weet*, morphologically *ku'+weet*, where *ku'* is a prefix indicating epistemic uncertainty and *weet* is the yes/no question marker.

(5) Context: Coyote has just washed up dead on the riverbank. Magpie says:

'ete **ku'**-itu-nm iceyeye-ne poo-pciyaw-na. **ku'weet** uus in-sikstiwam silímtas̄
 surely UNSURE-what-ERG coyote-OBJ 3/3-kill-PERF. UNSURE-Y.N has 1SG-friend brow.fat
 Something has killed coyote. Perchance my friend has brow fat. (Phinney 1934, 64)

(6) Caan **ku'weet** hi-tewye-ce Siminikem
 J UNSURE-Y.N 3SUBJ-live-IMPERF Lewiston
 John might live in Lewiston

The uncertainty marker *ku'* combines with *wh*-words to produce what Alonso-Ovalle and Menendez-Benito (2003) have called "epistemic indefinites": indefinite words that overtly mark a speaker's lack of knowledge.

itú what *ku'itú* something (I don't know what)
isí who *ku'isí* someone (I don't know who)
míne where *ku'míne* somewhere (I don't know where)

...

This pattern suggests that *ku'weet* is akin to 'I don't know whether...'

2 Non-epistemic modality

There are two grammaticized ways of indicating non-epistemic modality (possibility or necessity in view of factors other than the speaker's knowledge), only one of which is used by today's speakers.

2.1 Modal suffix -'aā

The modal suffix -'aā is not in usage among today's speakers. It affixes to a verb in the perfect or the imperfective aspect (Aoki 1970, Rude 1985, Crook 1999) and seems to mark ability or counterfactual modality. (There are some textual indications that it marks epistemic modality as well.)

(7) hii-pí-t-'ā
 3SUBJ-eat-PERFECT-MODAL
 He could eat (Crook 1999: 117)

(8) hii-p-sáan-'ā
 3SUBJ-eat-IMPERF-MODAL
 He could have been eating (Crook 1999: 117)

Speakers do not produce examples using -'aā and so little is known about its semantics at this point. Morphologically, it appears to be simplex.

2.2 Modality via future and past

A primary focus here is the modal suffix complex -o'+qa, consisting of -o' future and -qa recent past.

(9) hii-p-ó'-qa
 3SUBJ-eat-FUT-REC.PST
 He could eat (Crook 1999: 118)

- (10) hi-paa-p-**o'-qa** met'u hi-née-sepe-witne-ne
 3SUBJ-S.PL-eat-FUT-REC.PST but 3SUBJ-O.PL-CAUS-leave-PERF
 They could have eaten but she made them leave (Crook 1999: 116)

Unlike the English translation 'They could have eaten', *o'qa* examples lack an epistemic reading.

The combination of future plus past is a common way of indicating counterfactual modality, e.g. in English (*would* = WOLL + PAST; Abusch 1988), Greek (Iatridou 2000), Navajo (Smith, Perkins, and Fernald 2003), etc. Importantly, Nez Perce future+past modal *o'qa* has counterfactual uses, but is not restricted to them.

Three facts about *o'qa* will interest us here:

1. *o'+qa* is morphologically compositional: future plus recent past (not lexicalized)
2. *o'qa* is underspecified for conversational background [i.e. can form ability modals, counterfactual modals, deontic modals]
3. *o'qa* is underspecified for quantificational force [i.e. can form both universal modals (like Eng. *must*) and existential modals (like Eng. *may*)]

3 Morphological composition of *o'qa*

The evidence that *o'qa* is not a single, lexicalized modal comes from the CISLOCATIVE morpheme, a very interesting piece of the tense/aspect system that indicates action near or towards the speaker/attitude holder.

On a motion verb like '*ac* 'enter (a space)', the cislocative locates the endpoint of the motion proximal to the speaker:

- (11) hi-'aci-m
 3SUBJ-enter-CIS
 He/she just came in

The cislocative follows the future (12), and thus breaks up the modal construction (13). The modal construction and the cislocative each preserve their contributions to meaning:

- (12) weet taxc aayat hi-'ac-o'-kom?
 Y.N now woman 3SUBJ-enter-FUT-CIS
 Will the lady come in?
- (13) weet hi-'ac-o'-kom-qa aatway?
 Y.N 3SUBJ-enter-FUT-CIS-REC.PST old.woman
 Can the old lady come in?

This suggests that the modal construction in *o'qa* should not be taken as a single, unanalyzed grammatical unit. Ideally, the semantic contribution of *o'qa* should be that of future -*o'* plus that of recent past -*qa*.

4 Semantics of *o'qa*

Some background:

- A modal expresses quantification over possible worlds.

- Modal quantification is restricted by a contextually-supplied CONVERSATIONAL BACKGROUND (Kratzer 1977, 1981), which tells us which worlds are being quantified over (e.g. those compatible with what is known in the actual world, those compatible with the law in the actual world) and establishes an ordering among the worlds.
- In many languages, particular modals are restricted in terms of which conversational background they can be restricted by: e.g. Eng. *may* in (14) can be deontic but not ability.

(14) She may lift a table.

- a. She has permission to lift a table.
- b. *She has the ability to lift a table.

- Modals also are known to vary in their QUANTIFICATIONAL FORCE.

Existential modals say that in *some* worlds in the set provided by the conversational background, the proposition is true: Eng. *can, may, might* are existential modals.

Universal modals say that in *all* worlds provided by the conversational background, the proposition is true; Eng. *must, have to, will* are universal modals.

- > Nez Perce modal *o'qa* is underspecified for conversational background (except that it cannot be epistemic).
- > Nez Perce modal *o'qa* is underspecified for quantificational force.

4.1 Conversational background underspecification

4.1.1 *o'qa* ability

Modal *o'qa* is used in expressions of a subject's ability.

- (15) Context: a discussion of the size of Whoppers at Burger King

hinaq'i-o'-qa kúckuc
 finish-FUT-REC.PST small
 I can finish a small one

- (16) Turtle and Bull are about to race. Turtle explains that he will be swimming, not running:

kala 'iin kuus-pe kiy-u'. weet'u mi's teqesemiy iin wila-kayk-o'-qa
 just 1SG water-LOC go-FUT. NEG at.all on.shore 1SG run-go-FUT-REC.PST

I will just go along in the water because on shore I could not run at all. (Phinney 1934, 121)

In cases like the following, the understood tense of the verb is future:

- (17) 'e-q'uyimn-o'-qa

3OBJ-climb-FUT-REC.PST

You can climb it! (what you might say to a person too scared to climb a cliff)

- (18) Context: I am on the top of the cliff, having climbed up, and my sister is below. I call down to her:

'e-q'uyimn-o'-kom-qa

3OBJ-climb-FUT-CIS-REC.PST

You can climb up here

Comment: "inviting her to come join up on the top"; "you too can climb this cliff!"; "words of encouragement: you can achieve this!"

4.1.2 *o'qa* counterfactual

Modal *o'qa* is used in both the antecedent and the consequent of a counterfactual conditional.

- (19) Context: I am female and my name is Amy Rose

calewí wik-**o'-qa** háacwal inim weníkt wicé-**yo'-qa** Pulét
if be-FUT-REC.PST boy my name become-FUT-REC.PST B
If I were a boy my name would be Brett

- (20) Context: Coyote has just killed the monster and divided its body parts among various peoples. Nothing is left of the monster. Fox asks Coyote why he's given away all the parts of the monster and not left anything for himself. Coyote replies:

ku'us 'ee 'uyit-pe hi-n-**o'-kom-qa** ka ina-n-**yo'-qa**
thus you first-LOC 3SUBJ-say-FUT-CIS-REC.PST and 1SG.REFL-give-FUT-REC.PST
You should have told me that in the first place and I would have given something to myself.
(Phinney 1934: 26)

In counterfactual uses such as these, the understood tense of the verb is past or present.

4.1.3 *o'qa* permissive

Modal *o'qa* is used to grant or ask for permission.

- (21) tepelweku's-ne 'a-p-**o'-qa** hip-naaq'it-pa
candy-OBJ 3OBJ-eat-FUT-REC.PST eat-finish-LOC
You can eat candy after the meal

- (22) weet'u 'iin e-q'uyímn-**o'-qa**
NEG 1SG 3OBJ-climb-FUT-REC.PST
I can't climb it (ability or permission)

- (23) weet-ex kiy-**o'-qa** áatinwas-x
Q-1SG go-FUT-REC.PST bathroom-to
Can I go to the bathroom?

In these cases, the understood tense of the verb is future.

4.1.4 Other uses of *o'qa*

The *o'qa* modal is also used in many cases that are difficult to classify as ability, permission or counterfactual, and which are translated by a variety of English modals:

- (24) kún'u míniku ciq'áamqal hi-wewluq-**o'-qa**
dunno which dog 3SUBJ-want-FUT-REC.PST
I don't know which dog he would want

- (25) teminiq-**o'-qa** támsas koná
plant-FUT-REC.PST rose here
You could plant roses here

- (26) pa'ys koná támsas hi-pim'n-**o'-qa**
maybe here rose 3SUBJ-grow-FUT-REC.PAST
Probably the roses would grow there

- (27) minma'í kíye hin-**o'-qa**
what.way we say-FUT-REC.PST
How could we say it? (one informant asks another in response to an elicitation sentence)

4.2 Quantificational force underspecification

To this point we have seen mostly cases where *o'qa* expresses an existential modal: in *some* worlds compatible with rules/abilities/etc, the proposition holds. But *o'qa* can also express universal modals:

(28) *Necessity in view of the circumstances of the world:*

lepehem watelq-**o'-qa** 'ee hipt-'ayn kem kaa kiy-**o'-qa** pasxa-px
 twice stop-FUT-REC.PST 2SG food-BEN when-2SG go-FUT-REC.PST Boise-to
 You have to stop twice for food when you go to Boise.

(29) *Necessity in view of the rules:*

oyakala ciq'aamqal hi-pe-wice-**yo'-qa** imiit cikeet-pe
 all dog 3SUBJ-S.PL-be-FUT-REC.PST inside night-loc
 All dogs must stay inside at night

(30) *Necessity in view of a counterfactual supposition:*

calewí wik-**o'-qa** háacwal inim weníkt wicé-**yo'-qa** Pulét
 if be-FUT-REC.PST boy my name become-FUT-REC.PST B
 If I were a boy my name would be Brett

(31) *Necessity in view of a goal:*

calewí 'ee ta'c cix-n'ipéecwi-se nimiputímt, ilexní-ne cíq'in 'a-cookwan-**ó'-qa**
 if you well speak-DESID-IMPERF nez.perce.lg many-OBJ word 3OBJ-know-FUT-REC.PST
 If you want to speak Nez Perce well, you have to know a lot of words (or: you should know, you need to know)

(32) 'e-tuseq-**o'-qa** lehey
 3OBJ-knead-FUT-REC.PST long.time
 You have to knead it (bread) for a long time

The underspecification of quantificational force that we see in *o'qa* is similar to that attested in nearby, but unrelated, Salish languages (Matthewson, Rullmann, and Davis 2005).

5 Ingredients to *o'qa*

- > Only future *u'/o'* and recent past *qa* can be used to build a modal.
- > The future may encode a quantificationally variable modality, unlike English *will*.

5.1 Choice of futures and pasts

Only *o' + qa* makes a general purpose modal; different future markers and the remote past marker do not form modals like *o'qa*.

	recent past <i>qa</i>	remote past <i>ne</i>
future <i>o' 'will'</i>	modal <i>o'qa</i>	*
future <i>tet'ee 'gonna'</i>	past-of-future	past-of-future

(33) hi-weqi-tat'áa-sa-qa
 3SUBJ-rain-GONNA-IMPERF-REC.PST
 It was getting ready to rain

5.2 Quantificational force of the future

The future *u'/o'* expresses a modality, not a tense, in Nez Perce. Morphological differences between future and the (past) tense markers:

- a. Future occurs inside cislocative; tense occurs outside it.
- b. Future is incompatible with aspect marking; tense is compatible with it.
- c. Future can be combined with tense; tense cannot be combined with tense.
- d. Future forms the base for non-epistemic modals of all sorts!

The future is a modal that quantifies over worlds that are the same as the actual world up to the present moment (Condoravdi 2003).

Can the quantificational force variability seen in *o'qa* constructions be found in future *u'/o'* on its own? There are some hints that it can.

(34) Context: Meadowlark is giving a boy advice on how to kill the cannibal who has caught all his older brothers with a lasso of intestines and eaten them. (Aoki 1979, 32)

- a. wáaqo' la'ám'saqama hi-wyaakal'amk-s kaa kii'u 'ee 'iim we. ku's-tiite 'ee
already all.brothers 3SUBJ-eat.up-PERFECT and here you you be thus-same you
'ime-néen=k'e hi-ki-yú'.
2SG-OBJ-also 3SUBJ-do-FUT

Now he has already eaten up all the brothers. And here you are. In the same way he will do it to you.

- b. wâ kál'o' 'ee wáaqo' naaqc híce. tâcée haníy-o' 'aps-nim weyúux-pe t'awa
and just you now one tell soon make-FUT flint-GEN leg-LOC thingie
wii-wel'etp'e-yu' pelqéey kaa 'imútkin'ike q'o' xîxáw'oc'o 'ee tâc 'aps-nim
DIST-tie.on-FUT both.sides and on.inside quite sharp and soon flint-GEN
haníy-o' kamkaa hi-tamáasitkatk-o' kawá 'ee wiléeke'yk-u' 'ee q'o' 'iméeqpish-u' kaa
make-FUT when 3SUBJ-lasso-FUT then you run-FUT you quite try.hard-FUT and
yô 'ee xît'il' 'e-kiy'eny-u' máymay
that you break 3OBJ-do-APPL-FUT intestine
Right now I'll tell you one thing. You make flints and tie them tightly on both sides of the leg, and place real sharp flint pieces on the inside. When he lassoes you, then you run, run hard, and you will break the intestines.
- c. wéetmet háamti'c téem'ik-u'. 'i'yéwki 'ee kiy-ú' 'imáa-sy'awni-n'.
do.not fast go.down-FUT slowly you go-FUT 2SGREFL-guard-PERFECT
'ime-néen=k'e 'ee hi-wápciy'awn-o'
2SG-OBJ=also you 3SUBJ-kill-FUT
Don't go down fast. Go slowly and guard yourself. He will kill you also.

Meadowlark in these examples is not fortelling the boy's demise. She is telling him in one breath that the cannibal will kill him and that by following her advice, he will break the intestines and defeat the cannibal. Note that English *will* is anomalous here but Nez Perce future *u'/o'* is not. This may be because future *u'/o'* has variable quantificational force.

6 Overview of the modals

The main dividing line among Nez Perce modals opposes epistemic and non-epistemic modals.

- Epistemic modals are particles:
pa'ys 'maybe' *paalwit* 'perhaps' *ku'weet* 'I don't know whether...'
- Non-epistemic modals (for current speakers) are formed by future plus recent past, *o'+qa*.
 Here the future morpheme plausibly contributes modal quantification (of variable quantificational force); a large remaining question is the role of the recent past marker in the *o'qa* modal.

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