

A Sketch of Modals in Chuukic Languages

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Chuukic Language Family

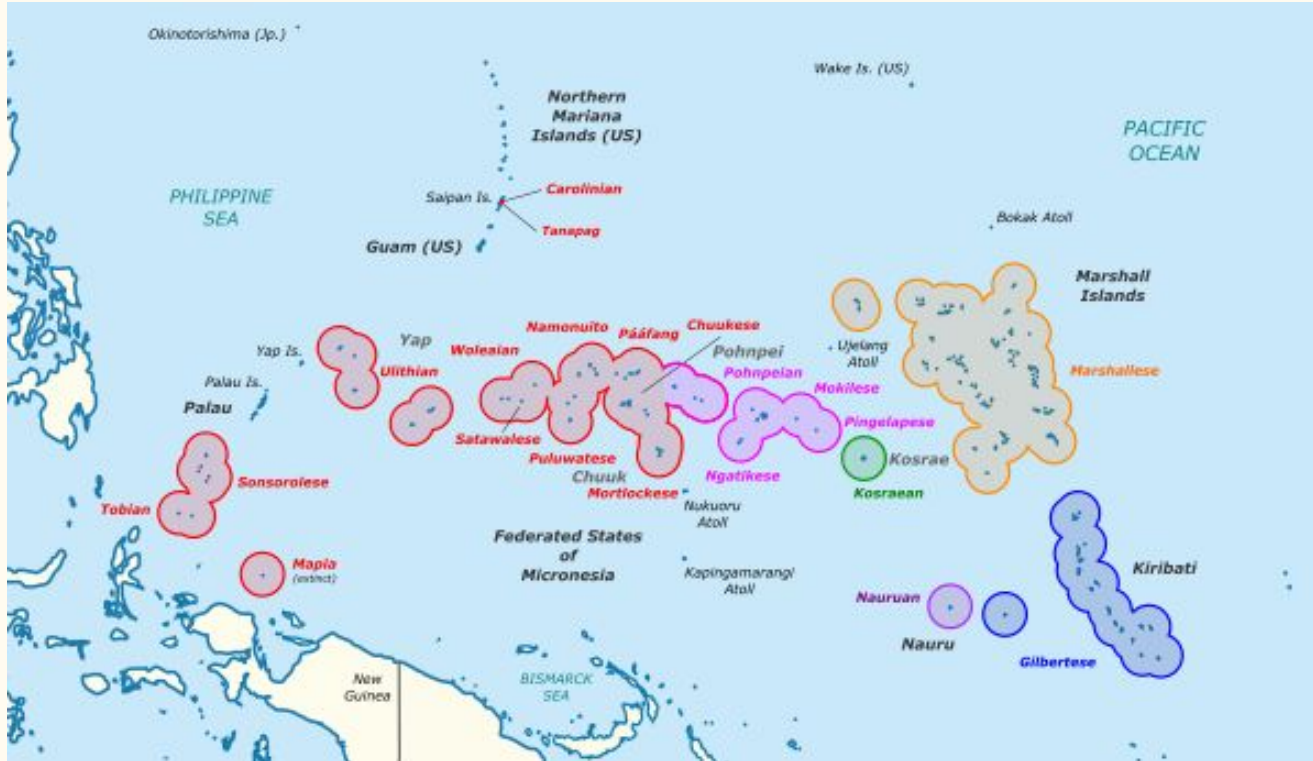


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Chuukic Language Family

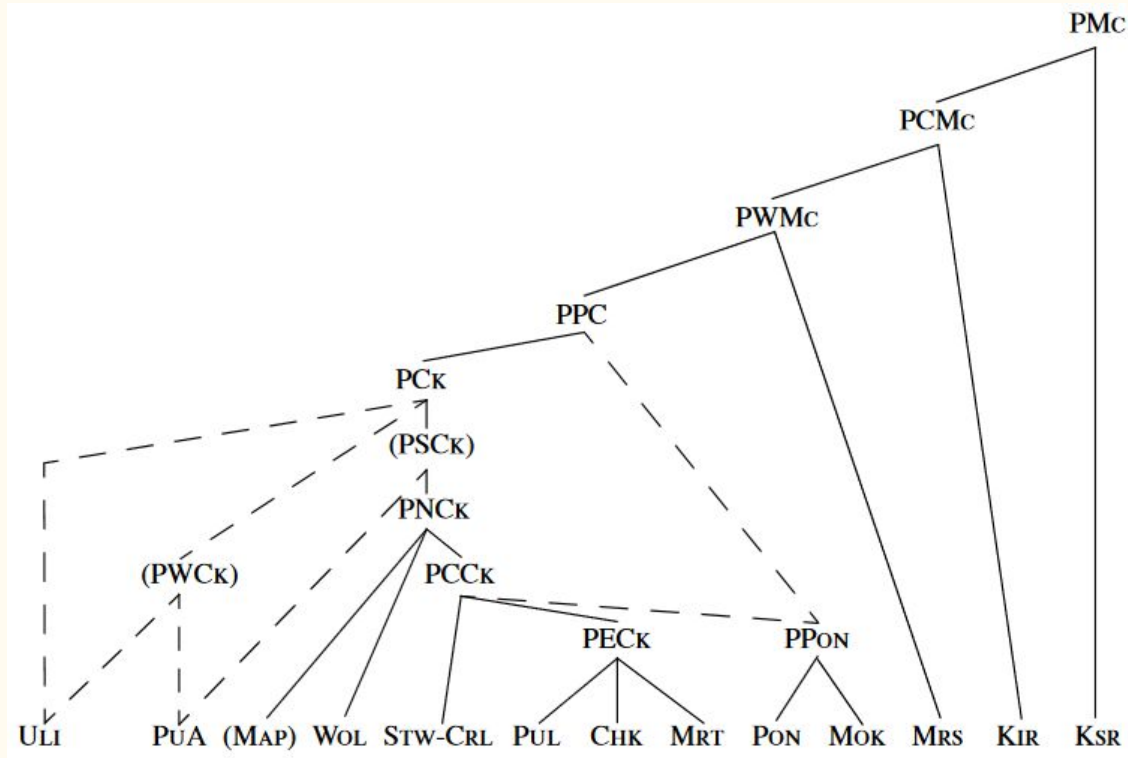


Figure 2: Historical relationship of Micronesian languages (Bender et al. 2003a).

What are modals?

Two types of modals:

- (1) Event modality: speaker's attitude towards an event
 - (a) Similar to ability and obligation
 - (b) I can swim.
- (2) Propositional modality: speaker's attitude towards the truth value of an event
 - (a) Similar to possibility and necessity
 - (b) I might swim.

Broad category: “concerned with the status of the proposition that describes the event” (Palmer 2001: 1)

Sometimes, other categories (negation, future/irrealis) are considered “modality”

Vary in their force and scope → e.g. must is stronger than should

What are modals? (cont.)

Can surface as any of the following:

- Inflection (mood)
- Auxiliary verb
- Main predicate verb
- Adverbs
- Periphrastic construction (combination of words)

Thus, “modals” can be considered a shorthand for “modal constructions”

Often related to tense and aspect

Question: How do Chuukic languages express modality?

Overview of Modality in Chuukic

Survey based on language grammars, dictionaries and translations

From the following languages:

- Woleaian (Woleai dialect)
- Ulithian
- Puluwatese
- Trukese
- Satawalese
- Carolinian
- Sonsorol
- Pulo Annian
- Mortlockese

Analysis of Modals

- Sparse documentation - primarily based on translation, which is risky, and loses many nuances (cf. Figure 2)
- Many occurrences where translation contained modal not reflected in sentence: risk of English-based analysis
- Grammars that included narratives or example sentences are easiest to work with
- Either event *or* propositional modal recorded in grammars: rare to find both (exception is Ulithian)
- Most discussions deal with negation and future (irrealis) rather than event and propositional modality

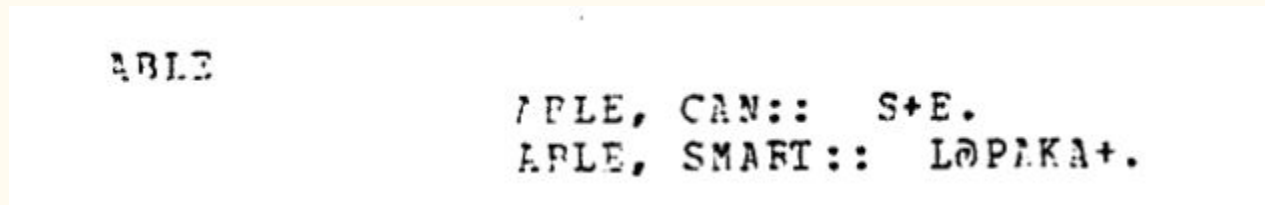


Figure 3: Excerpt from Oda (1977: 309)

Modality in Chuukic (a sample)

Woleaian (WOL)	<i>be</i> ‘IRR’, <i>bel</i> ‘IRR (immediate)’, <i>te</i> ‘NEG’, <i>tewai</i> ‘IRR.NEG’, <i>baabe</i> ‘IRR (unspecified)’
Ulithian (ULI)	<i>le</i> ‘jussive,’ <i>de</i> ‘negative jussive,’ <i>yoxo</i> ‘possible,’ <i>xaree</i> ‘by any chance’
Puluwatese (PUL)	<i>mwongé</i> ‘even’, <i>mwéngé</i> ‘can’, <i>mwáán/mmwan</i> ‘would,’ <i>yátá</i> ‘would;may’, <i>mááli</i> ‘perhaps’, <i>fer(i)/fááy</i> ‘certainly;already’, <i>mwo</i> ‘IMP’, <i>te</i> ‘NEG.IMP’, <i>pwe</i> ‘IRR’, <i>hópw</i> ‘IRR.NEG’, <i>pwe</i> ‘IRR’, <i>pwe le</i> ‘IRR (immediate)’, <i>hÁ</i> ‘no.longer’, <i>háán</i> ‘not.yet’
Trukese (TRU)	<i>nnaaf/ngeni</i> ‘be able to,’ <i>tongeni</i> ‘to be able to, can,’ <i>-pwe/-pwa/-pwo</i> ‘IRR’, <i>-se</i> ‘NEG’, <i>-sapw</i> ‘IRR.NEG’, <i>pwe ne</i> ‘IRR (immediate)’, <i>te</i> ‘NEG.IMP’, <i>pwaapw</i> ‘IRR (unspecified)’, <i>eni</i> ‘perhaps’
Satawalese (SAT)	<i>pwe mwen(en)</i> ‘to.be.able’, <i>pwe</i> ‘IRR’, <i>pwene</i> ‘IRR (imminent)’, <i>ete</i> ‘might’, <i>mani</i> ‘maybe’, <i>mmwenn</i> ‘possible’, <i>mine</i> ‘certainly’, <i>soapw</i> ‘IRR.NEG’, <i>sa</i> ‘NEG.PRF’, <i>se</i> ‘NEG’
Carolinian (CAR)	<i>emmwel/mmwel</i> ‘to.be.able;possible’, <i>máli/meli</i> ‘maybe’, <i>téeschigha</i> ‘maybe (negative)’, <i>teefúrh</i> ‘to.be.able’, <i>-hààl/-sààl</i> ‘not.yet’, <i>-saa</i> ‘no.more’, <i>-he/-se</i> ‘NEG’, <i>-hóbw/-ssóbw</i> ‘will.not’, <i>-te/-tu</i> ‘NEG.SJV’, <i>-bwe</i> ‘IRR’, <i>-bwele(e)</i> ‘IRR (imminent)’, <i>mal/man</i> ‘certainly’
Sonsorol (SON)	<i>naweri</i> ‘by no means,’ <i>suje</i> ‘to.be.able’, <i>kāme</i> ‘to.be.able’, <i>tai/tei</i> ‘no.longer’, <i>tōsu</i> ‘not.yet’, <i>towai</i> ‘IRR.NEG’, <i>bwe/bwe</i> ‘IRR’, <i>rau</i> ‘IRR (imminent)’, <i>kukur</i> ‘perhaps’, <i>xale</i> ‘perhaps’
Pulo Annian (PUA)	<i>towai</i> ‘IRR.NEG’, <i>mwo</i> ‘indeed, could’, <i>pwe</i> ‘IRR’, <i>mana</i> ‘perhaps’, <i>taai</i> ‘no.longer’, <i>ta(i)/te(i)</i> ‘NEG’, <i>sie</i> ‘possible’, <i>mana</i> ‘perhaps’, <i>konoa</i> ‘possible’
Mortlockese (MOR)	<i>pə</i> ‘IRR’, <i>pə le</i> ‘IRR (immediate)’, <i>p^wap^w</i> ‘IRR (unspecified)’, <i>sə</i> ‘NEG’, <i>sap^w</i> ‘IRR.NEG’, <i>sæn</i> ‘not.yet’, <i>tə</i> ‘lest’

Proto-Reconstructions: Overview

Bender (2003a, b):

- Negation:
 - PC_K *ta- ‘NEG’: CAR <se> *sá* ‘NEG’, PUL <há> *hæ* ‘NEG’, ULI <ta> *ta* ‘NEG (stative)’, WOL <ta> *ta* ‘NEG (stative)’
 - PC_K *-tai ‘NEG’: ULI <te> *te* ‘NEG’, WOL <tei> *tei* ‘NEG (eventive)’
 - PC_K *taani ‘NONDUM’: CAR <sáál> *sæ:l* ‘NONDUM’, PUL <háán...mwo> *hæ:n...m^wo* ‘NONDUM’, SAT <saen> *sæn* ‘NONDUM’
 - PC_K *taa[iØ] ‘DSC’: CAR <sáá> *sæ:* ‘DSC’, PUL <há...no> *hæ...no* ‘DSC’, WOL <taai> *taai* ‘DSC’
 - PM_C *tap^wu ‘FUT.NEG’: CAR <ssóbw>~<hóbw> *s:ɔb^w~hɔb^w* ‘FUT.NEG’, SAT <soapw> *sɔp^w* ‘FUT.NEG;IMP.NEG’
 - PC_K *de IMP.NEG’: CAR <te> *tá* ‘IMP.NEG’, PUL <te> *te* ‘IMP.NEG’, WOL <te> *te* ‘IMP.NEG’
- Irrealis:
 - PC_K *-p^we ‘FUT’: CAR <bwe> *b^wá* ‘FUT’, PUL <pwe> *p^we* ‘FUT’, SAT <pwe> *p^wɛ* ‘FUT’, ULI <be> *β^we* ‘FUT’, WOL <be> *b^we* ‘FUT’
 - PC_K *-le ‘FUT (immediate)’: CAR <bwe> *b^wáá* ‘FUT (immediate)’, PUL <pwele> *p^wele* ‘FUT (immediate)’, SAT <pwele> *p^wɛɛ* ‘FUT (immediate)’, ULI <bele> *β^wele* ‘FUT (immediate)’, WOL <bele> *b^were* ‘FUT (immediate)’
 - PC_K *p^waap^wa ‘FUT (unspecified)’: CAR <bwaabw> *b^wa:b^w* ‘FUT (unspecified)’, PUL <pwaapw> *p^wa:p^w* ‘FUT (distant)’, TRU <pwaapw>, WOL <baaba> *b^waab^wa* ‘FUT (unspecified)’

Proto-Reconstructions: Overview (cont.)

Bender (2003a, b):

- Event:
 - PCk *m^wm^wele ‘able’: CAR <(e)mmwel> (ɿ)m:^wɿlɿ ‘to.be.able;possible’, SAT <(m)mwene> (m)m^wɛne ‘to.be.able;possible’, Wol <(m)mwele> (m)m^wɛɛ ‘to.be.able’
 - PCk *kila ‘to.see’: CAR <g(h)ule> gɿlɿ~xɿlɿ ‘to.know’, PUL <kúleey> kile:j ‘to.know’, SAT <kiunei> kɿnei ‘to.know’, ULI <xula> xɿlɿ ‘to.know’, Wol <giula> xɿɿɿ ‘to.know’
 - PCk *kana ‘habit’: CAR <gan>/<ghal> gan~xal ‘HAB’, SAT <kaen> kæn ‘HAB’, Wol <gale> xarɛ ‘HAB;to.be.able’
- Propositional:
 - PCk *m^wo ‘emphasis.marker’: CAR <mwo> m^wo ‘please;IMP’, PUL <mwo> m^wo ‘should;IMP’ SAT <mwo> m^wo ‘IMP’, Wol <m(w)o> m^(w)o ‘contrastive.marker;should’
 - PCk *malii ‘maybe’: CAR <máli> mæli ‘maybe’, PUL <mááli> mæ:li ‘maybe’, SAT <mani> mani ‘maybe’, TRU <meni> meni ‘maybe’, ULI <malboo> malβ^woo ‘maybe’ Wol <mali> mari ‘maybe’

Proto-Reconstructions: What do they tell us?

- Reconstructions found for negation and future (irrealis mood), few for other event or epistemic modalities
- Two possibilities:
 - 1) Modal constructions are too volatile in language development, so only new, non-cognate forms are found in descendant languages
Unlikely - modals have been well reconstructed for other proto-languages
 - 2) Modal constructions are under-described, making them difficult to reconstruct
- Modal reconstructions can draw sharp lines for subgrouping:
 - PC_K *taani ‘NONDUM’ vs. P_Uli-Wol *teidi ‘NONDUM’ (U_{LI} *teed*, Wo_L *teiti*)
 - PC_K *tap^wu ‘FUT.NEG’ vs. P_Uli-Wol *towai ‘FUT.NEG’ (U_{LI} *towee*, Wo_L *tewai*)
 - PC_K *yoko ‘to.catch’ > P_Uli-Wol *yoxo ‘to.catch;to.be.able’ (U_{LI} *yoxo*, Wo_L *yogo*)

Contribution to Theory of Modal Development

Modal reconstructions allow for understanding of how modals come about in language change:

- PC_K *yoko ‘to.catch’ > PU_{LI}-Wo_L *yoxo ‘to.catch;to.be.able’ (U_{LI} *yoxo*, Wo_L *yogo*)
 - Lexical → Modal
- PC_K *kana ‘habit;HAB’ > Wo_L *gale* ‘HAB;to.be.able’
 - Aspectual → Modal
- PC_K *m^wm^wele ‘to.be.able’ > CA_R *mmwel* ‘to.be.able;possible’, SA_T *mmwene* ‘to.be.able;possible’
 - Modal (deontic) → Modal (epistemic)

Novel data on Woleaian (Eauripik Dialect)

- Data elicited from language consultant Lenny Saumar
 - 32 year old student from Eauripik Atoll
 - Moved to Hawai'i in 2017
 - Speaks Woleaian natively
- Field Methods Class in 2021-2022 at University of Hawai'i at Mānoa
- Targeted elicitations that focussed on both event and propositional modality

Propositional Modals in Woleaian

4 modals: *mo* ‘should,’ *ye gachiu iga...mo* ‘must,’ *mali* ‘maybe’ and *faisule* ‘definitely’

(1) I-be lagoon mo.

1s-irr to.go should

‘I should go.’

(2) Ye gachiu iga i-be mo!

3s good if 1s-irr should

‘I must go!’

Propositional Modals in Woleaian (cont.)

4 modals: *mo* ‘should,’ *ye gachiu iga...mo* ‘must,’ *mali* ‘maybe’ and *faisule* ‘definitely’

(3a)	I-tewai	fasiule	yaafe.	(3b)	I-tewai	yaafe.
	1s-neg.irr	definitely	to.swim		1s-neg.irr	to.swim
	‘I <u>definitely</u> will not swim.’				‘I will not swim.’	

(4a)	Mali	i-tewai	yaafe.	(4b)	Mali	i-be	yaafe.
	maybe	1s-neg.irr	to.swim.		maybe	1s-irr	to.swim
	‘ <u>Maybe</u> I will not swim.’ ($\leq 50\%$)				‘ <u>Maybe</u> I will swim.’ ($\geq 50\%$)		

Mali and *fasiule* with negation can be used to express a broad range of likelihoods

Propositional Modals in Woleaian (cont.)

4 modals: *mo* ‘should,’ *ye gachiu iga...* *mo* ‘must,’ *mali* ‘maybe’ and *faisule* ‘definitely’

- (5) Mali i-be yaafe. I-be fasiule yaafe.
maybe 1s-irr to.swim 1s-irr definitely to.swim
‘I probably will swim.’ (~75%)

Mali and *fasiule* with negation can be used to express a broad range of likelihoods

Event Modals in Woleaian

Three main event modals: *gale* ‘habitual,’ *mwele* ‘can,’ and *giula* ‘know’

(6) I-gale yaafe.

1s-hab to.swim

‘I (regularly/can) swim.’

(7) I-mwele yaafe.

1s-can to.swim

‘I can (restricted) swim.’

(8) I-giula yaafe.

1s-know to.swim

‘I can (know how) to swim.’

Modal Stacking

Phenomenon that is not previously attested or described in grammars/dictionaries

(9) Yaremate re-gale mwele yaafe.

people 3p-hab can to.swim

‘People can swim.’

Context: People can swim anytime, anywhere.

(10) Yaremate re-mwele giula yaafe.

people 3p-can know to.swim

‘People can know how to swim.’

Context: Some people can know how to swim, some cannot.

Modal Stacking (cont.)

(11) Yaremate re-gale mwele giula yaafe.

people 3p-hab can know to.swim

‘People can know how to swim.’

Context: All people, even those without access to water, can know how to swim.

Important: The differences between these sentences are not clear from the English translation. The context is important to determine the difference and interactions between these modals.

Structure of Modality

Typological implications:

- Modal stacking allows us to produce an ordering for the elements in Woleaian verbal clauses
- Such orderings can give insights into cross-linguistic tendencies
 - Supports Cinque's (2004) proposed cross-linguistic hierarchy for tense, aspect, and mood

mali 'MAYBE' > SUBJECT > PRO > *be* 'IRR' > *gale* 'HAB' > *ta-* 'NEG'
mwele 'CAN' > *ta-* 'NEG' > *giula* 'KNOW' > VERB > *mo* 'SHOULD' >

Figure 4: Ordering of elements in a Woleaian verbal clause

Conclusion / Future Work

Implications for Documentation

- Modal semantics in Micronesian languages is underdocumented in current literature
- Emphasizes importance of working with legacy materials to see existing gaps
- Ontological bias from our L1 language/culture
- For dictionary or pedagogical work, a wide variety of example sentences with glosses (not just translations) are needed

Conclusion

- Chuukic languages tend to express modality as auxiliaries, adverbs, and predicate verbs
- Modals are highly polyfunctional and have overlap with other languages
- Understanding modality synchronically gives diachronic (and, thus, cross-linguistic) insights

Gosa gashig shig!
Thank you!

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