Chapter 1

Modality

1.1 Introduction

One of human language's most powerful traits is its ability to transmit information about possible alternatives to the way the world is. *It **might** be raining*, for instance, or *Tomorrow we **will** head west*, or *Bring a book just **in case***. Other animals can think of alternatives to the world and act accordingly, but only humans are observed communicating about them. In semantics, we use the term **modality** broadly to encompass all elements of linguistic meaning that treats these alternatives.

Often, linguists will use the noun **modal** in a structural sense to describe a closed class of verbs that express modal meanings, such as the morphologically defective auxiliaries like *might* or *should*. With a semantic focus we will not limit ourselves in this way, and retain *modal* as an adjective relating to any kind of modality. Modal meaning is found up and down the grammar, sometimes in unexpected ways. Kiowa is no exception, e.g. in the modal adverb in (1), the verbal inflection in (2), or the incorporated stem in (3).

(1) **hàgʲà** â:=bǫ̀n–mɔ̀
hàgà â:$_{*}$=bón–mɔ́
maybe 3EMPA:1SGO=see$_{\text{IPFV}}$–IPFV$_{\text{VT}}$
'Maybe they can see me.'[1]

(2) kʰʲą́hį́:gɔ́: ∅=jí:–jà=dè+pè:–gù ét=âj–**tɔ̀:**
kʰáhį́:gɔ́: ∅=jí:–jà$_{*}$=dé+pé:–gú ét=âj$_{*}$–**tɔ́:**
tomorrrow 3SGS=disappear$_{\text{IPFV}}$–IPFV$_{\text{VI}}$=NOM+direction–to 1EXCLA:3PLO=start off.PFV–**MOD$_{\text{VT}}$**
'Tomorrow we (will) head west.'

(3) kút bàt=s**ǫ̂j**+kǫ̀n
kút bàt=s**ǫ̂j**$_{*}$+kɔ̂n
book 2SGA:3PLO=**in case**+bring.PFV.IMP
'Bring a book just in case.'

1.1.1 Categorizing modal meanings

We will organize the documentation of modal meanings around two basic dimensions we use to distinguish them—force and flavor. **Modal force** describes how many alternatives to the way the world is that a modal claim covers. For instance, telling someone *Carrie **can** go home* indicates what is a **possibility**, what happens in some of the outcomes. Meanwhile, saying *Carrie **must** go home* indicates a **necessity**, what happens in all the outcomes. **Modal flavor** tells us the basis for the modal we use. If we are in some situation where the regulations make Carrie's going home the issue, saying *Carrie has to be home* indicates that in all of the outcomes where the regulations are followed, Carrie is home: it is a requirement. If we are in some situation where the regulations are not at issue, but we are trying to figure out where Carrie is, the same sentence indicates that in all of the outcomes where our knowledge and inferences are correct, Carrie is home: it is a deduction.

[1] Abbreviations follow the Leipzig conventions for the most part. Subscripts indicate morphological conditioning; the form appears in this environment rather than expressing that meaning (e.g. $_{\text{ipfv}}$). Parentheses indicate what auxiliaries mean. '+' indicates stem combination. '\' indicates a non-linear affix. Uncommon abbreviations: A: agent, D: dative, O: object, S: subject. ANAPH: anaphoric, BAS: basic number, $_{\text{C}}$: combining form, DEF: definite, DETR: detransitive, DF: different subject/situation EMP: empathetic plural, EXCL: dual/plural exclusive, HSY: hearsay evidential, IMP: imperative, INCL: dual/plural exclusive, INDEF: indefinite, INFER: inferential epistemic modal, INV: inverse number, IRR: irrealis, MED: medial deixis, MOD: modal, PROX: proximate deixis, SA: same subject/situation, SPRD: spatially spread, VI: intransitive verb, VT: transitive verb

To formalize matters we can apply the framework laid out by Angelika Kratzer (2012), which builds off of years of research into modals by philosophers and semanticists. In this framework, force is applied by quantifiers over possible worlds, which are the alternatives to the actual world: in all/some/most possible worlds, etc. The flavor comes from **conversational backgrounds**, contextual sets of propositions we can use as a premise for modal reasoning. Together these make the bulk of the modal. For instance, if *Carrie can go home* in the context of regulations, we say that in some possible worlds where the regulations are followed, Carrie goes home. With the necessity modal, *Carrie must go home*, she goes in in all possible worlds where the regulations are followed.[2] The use of possible worlds helps us characterize and test modal meanings for understanding how Kiowa employs modality, no matter what the morphology is doing.[3]

1.1.2 Modal structure and inflection

The organization of modals by force and flavor provides a useful organization for this chapter. First, though, we will lay out a few structural notes. Most dedicated modal expressions in Kiowa are either adverbials or main verbs (4).

(4) a. **hàgɨà** są̀ː–dɔ̀ è=yáy+ɔ̨̀ːm–ɔ̨̀
hàgà są̀ː$_*$–dɔ́ è=yáy$_*$+ɔ̂m–ɔ̀
maybe child$_{\text{INV}}$–INV 3INVS=play+do$_{\text{IPFV}}$–IPFV$_{\text{VT}}$
'Perhaps the children are playing.' (§1.2.2.1)

b. są̀ː–dɔ̀ bét=jáj+**mɔ̨̀ɔ̀ːdèp**
są̀ː$_*$–dɔ́ bét=jáj$_*$+**mɔ̀ɔ́ːdèp**
child$_{\text{INV}}$–INV 3INVD:3PLS=play+**be unable.IPFV$_{\text{VI}}$**
'The children can't play.' (§**??**)

Kiowa has no modal auxiliary verbs; modal and semi-modal verbs are all main verbs. They are intransitive, with the subject being what is required, allowed, or possible (or not). If there is an entity involved, it is added as a dative/applicative argument (4b). One can compare (4b) to the English *It is impossible for the children to play*.

Kiowa has only one modal inflectional affix on verbs. This suffix has two allomorphs whose distribution depends on argument structure. The form –/tɔ́ː/ 'MOD_{VT}' is used with transitive verbs, while –/tʼɔ́ː/ 'MOD_{VI}' is used with intransitive ones.

(5) a. kʰʲą́hį́ː–gɔ́ː ę̀m=bǫ́ː–**tɔ́ː**
kʰą́hį́ː–gɔ́ː èm=bǫ́ː–**tɔ́ː**
morning–during 1SGA:2SGO=see.PFV–**MOD$_{\text{VT}}$**
'I will see you tomorrow.'

b. kʰʲą́hį́ː–gɔ́ː Carnegie–kɨ̀à ę̀m=tsą́n–**tʼɔ̀ː**
kʰą́hį́ː–gɔ́ː Carnegie–kà èm=tsán$_*$–**tʼɔ́ː**
morning–during Carnegie–at 2SGS=arrive.PFV–**MOD$_{\text{VI}}$**
'You will arrive in Carnegie tomorrow.'

This suffix is used for several kinds of modal meanings. We will summarize here and discuss details in the relevant sections. It is nearly always an indicator of circumstantial necessity: It expresses something that must happen given a selected set of facts that shape the situation. However, the kinds of facts vary, as does the strength of the necessity, so it gets translated into English by several different modals. In (5) there is the strong necessity of 'will' and it can also be used for 'have to', 'ought to', 'should' and even 'can' or 'might', depending on the context.

(6) ę́ː–hɔ̀ː–gɔ̀ː gɨàt=âj–**tɔ̀ː**
ę́ː–hɔ̀ː$_*$–gɔ́ː gàt=âj$_*$–**tɔ́ː**
PROX–DEF–during 1SGA:3PLO=start off.PFV–**MOD$_{\text{VT}}$**
'I have to/should/will/might go now.'[4]

[2] Sometimes it is intuitive to think of possible worlds as possible outcomes, although formally those are distinct items. So if Carrie must go home, then in all possible outcomes where she follows the regulations, she goes home, and so on.

[3] Philosophers and physicists argue over whether these other possible worlds actually exist, but as semanticists we need not worry: We can understand the systems of language as treating them as if they exist. Menzel (2021) has a useful summary of the debate in philosophy; Donoghue (2016) for physics.

[4] This verb is translated as an intransitive, but is morphosyntactically transitive.

This suffix is also used in conditional clauses, which are another expression of circumstantial necessity (Abusch 2012).

(7) ∅=sép+dɔ̀ː–**t'ɔ̀ː**=nɔ̀ hɔ́n há–já bà=bą́ː–mɔ̨̂ː–**t'ɔ̀ː**
∅=sép$_*$+dɔ́ː–**t'ɔ́ː**=nɔ̀ hɔ́n há–já bà=báː–mɔ̂ː$_*$–**t'ɔ́ː**
3SGS=rain+be–**MOD$_{VI}$**=if.DF NEG INDEF–to 1INCLS=go–NEG–**MOD$_{VI}$**
'If it rains we won't go anywhere.'

The modal suffix can be used in generic contexts to relay an expectation of how things typically unfold. In (8), the speaker is describing a traditional courting custom.

(8) t^{h}áj ∅=ą́ːg^ià–**t'ɔ̀ː** g∼ ìgɔ́ páː k'^{j}ɔ̨́–dé+pèː–dò
t^{h}áj ∅=ą́ːg^ià$_*$–**t'ɔ́ː** gɔ̀ hègɔ́ páː k'^{j}ɔ̨́–dé$_*$+péː–dò
on.top 3SGS=be.sitting\SG–**MOD$_{VI}$** and:SA then some love–BAS+direction–because
g^ià=dɔ́ː+k^{h}ɔ̨̂m–**tɔ̀ː**
gà=dɔ́ː+k^{h}ɔ̂m$_*$–**tɔ́ː**
3SGA:3PLO=sing+call.PFV–**MOD$_{VT}$**
'He would be on horseback and sometimes he would serenade his girlfriend.' (Kiowa Culture Program 1978: 00:30)

For the rest of this chapter the documentation will be organized by flavor and force.

1.2 Epistemic modality

Epistemic modality is a modal flavor that involves a speaker making inferences about the world based on what they know about it. In Kiowa, epistemic modality is almost exclusively expressed by adverbials. Structurally these adverbials can be free or obligatorily incorporated into the verb (Table 1.1). Semantically they express a range of forces or strengths.

force	Kiowa	English	note
necessity	/pàhį́ː/	'clearly, definitely'	incompatible with MOD
	/báːtsòl/	'clearly, definitely'	incompatible with MOD
	/mɔ́n/	'INFER'	incompatible with HSY
	/kòttè/	'likely, liable to'	incompatible with MOD
possibility	/hájáttò/	'maybe, perhaps'	requires MOD
	/hàgà/	'maybe'	also means 'or'
	/hén/+	'possibly'	must be incorporated
negative	/bèthêndè/	'unlikely, doubtful'	requires MOD, incompatible with NEG
	/ádàltè/	'unlikely, doubtful'	only found in word-lists

Table 1.1: Epistemic modal forms

1.2.1 Epistemic necessity

The term **epistemic necessity** describes modals that apply to all the possible worlds in which what the speaker knows about the world is true. They are often used to describe inferences. Epistemic necessity modals themselves can vary in strength, like how English *certainly* is stronger than *likely* or *probably*. Semanticists usually rely on domain restriction to bring about this variation of strength about. Domain restriction affects the strength of a universal quantifier (see chapter xx). *Everyone likes my book* tells us more about the world the wider the domain of *everyone* is. It is stronger. The narrower the domain, the fewer people 'everyone' means, and the less the proposition tells us about the world. It is weaker.

Since necessity modals denote universal quantifiers, this effect also works with modality. We add an **ordering source** that ranks the worlds so that some are the best, and the modal only takes the best of them, rather than all of them.[5]

Let us look at an example. Saying *Tom must be the culprit* indicates that all the worlds compatible with the known evidence show Tom is the culprit. Saying *Tom should be the culprit* only implicates Tom in all the best worlds compatible with the evidence…but there are still compatible worlds where he is not the culprit. The modal strength reflects the proportion of best compatible worlds to all compatible worlds: The closer we get to all of them being equally best, the stronger the modal. The further we get, the more worlds slip outside our modal's grasp, and the weaker the modal gets. (See Portner (2009) for more discussion).

In this section we will discuss the common epistemic modals in terms of strength, and list the less common ones.

1.2.1.1 /mɔ́n/ 'INFER'

The most common epistemic modal in Kiowa is /mɔ́n/ 'INFER', an adverb that expresses a broad necessity that ranges from somewhat probable to quite certain. This range is reflected in its range of English translations: 'must (have)', 'probably', 'might (have)', 'I suppose', or 'I guess'.

Its use signals an inference by the speaker based on the things they know about the world, to describe the things they do not know. It is often found with people recollecting to figure when something occurred. Hence its gloss as INFER rather than 'probably' or some other English translation.

(9) p'í:tè ą̀n ę́=hę̂:+tè?–tɔ̀ hétɔ́ à=sjɔ́n=ę̀: **mɔ́n** pą̂nsę́–òtè
p'í:tè àn ę́=hę̂:+tèt–tɔ̀ hétɔ́ à=sjɔ́n=ę̀: **mɔ́n** pânsę́–òtè
sister.NAME HAB 1SGD:3SGS=story+tell$_{IPFV}$–IPFV$_{VT}$ still 1SGS=small=when.DF **INFER** seven–as many as
ɔ́–j–hjɔ̀: ę́=sá:+dɔ́:
ɔ́–j–hɔ̀: ę́=sá:+dɔ́:
DIST–VAGUE–DEF 1SGD:3SGS=pass winter+be
'Great-Grandmother used to tell me this story when I was still little. I must have been no more than seven years old about then ' (McKenzie et al. 2022: S26)

It is frequently used in narratives to fill in gaps in the action, where the source information is not reliable. In (10), the speaker knows that Poolant had lost a horse, but had to suppose that the other man was taking care of it.

(10) pólą́:tè tsę̂: á=p'ɔ́j–hjèl=dè **mɔ́n** ɔ́gɔ̀ t'ɔ́k^{h}ɔ́j+k'í: ∅=hól=dè **mɔ́n**
pólą́:tè tsę̂: á=p'ɔ́j$_{*}$–hêl=dé **mɔ́n** ɔ́gɔ̀ t'ɔ́k^{h}ɔ́j+k'í: ∅=hól$_{*}$=dé **mɔ́n**
Poolant horse 3SGD:3SGS=lose.PFV–HSY=BAS **INFER** SBRD White+male 3SGA:3SGO=kill.PFV=BAS **INFER**
á=pɔ̀:+dô:
á=pɔ̀:+dô:
3SGA:3SGD:3SGO=bring$_{C}$+hold
'Poolant had lost one of his horses and the White man was probably keeping it for him.' (McKenzie et al. 2022: S131)

Speakers clearly distinguish /mɔ́n/ as epistemic in flavor. Of course, we do not simply ask them a question we might ask a fellow language researcher, like "Is this epistemic?" Instead, we can use contexts that lead towards or away from epistemic readings to control for this kind of modality, and see the distribution of modal forms like /mɔ́n/ given these contexts.

The crucial nature of epistemic modals is that they express what the speaker infers but does not know everything that happened. Consequently it is infelicitous to use them when the speaker does know what happened or did not happen. A test with such a context should rule out the use of /mɔ́n/, and it does.

Context:
John is a child, and is required to be home at this time of evening, because his parents said he had to be. However, you and I just saw him at Braum's eating an ice cream. I tell you:

[5] Rullmann et al. (2008) instead employs a **choice function**, which picks a subset of the worlds which varies in size. The larger the subset, the stronger the necessity.

(11) # John **mo̧n** tôj ∅=dɔ́:
John **mɔ́n** tôj ∅=dɔ́:
John INFER house.in 3SGS=be
'John must be home.'

Speakers reject this as false, as we predict. It is saying "To the best of my knowledge, it is probable that John is home," but that statement is clearly at odds with the best of our knowledge, since we know he is not home.

As for force, /mɔ́n/ can be classified as a necessity modal, but of varying strength, depending on what the speaker knows about the situation. In a context where the speaker is confident that Al is at home, (12) is unacceptable because all the possible outcomes of the speaker's inference involve Al being home. However, if they are not so confident, then only in the best outcomes is Al home, leaving the door open for other possibilities.

(12) Al **mo̧n** tôj ∅=dɔ́:, né̵ hàgɨà hétɔ́ gɨà=sɔ́:tè+tɔ̀:
Al **mɔ́n** tôj ∅=dɔ́: né hàgà hétɔ́ gà=sɔ́:tè$_*$+tɔ́:
Al INFER house.in 3SGS=be but maybe still 3SGA:3PLO=work+act(IPFV)
'Al {must be/is probably} at home, but maybe he's still at work.'

In addition, the strength of /mɔ́n/ can emerge from contrast with another modal. In (12), it is contrasted with weaker /hàgà/ (§1.2.2.1), and is interpreted as stronger necessity. If it is contrasted with a stronger modal, however, weakness comes out. We can directly compare /mɔ́n/ with the stronger modal /pa̧hɨ́:/ 'clearly, definitely' (§1.2.1.2). In (13), /pa̧hɨ́:/ indicates what the speaker knows to be true, while /mɔ́n/ fills in the knowledge gap a bit.

(13) tsę̂: pa̧hɨ́: ∅=ál+dɔ́:, **mo̧n** há:têl ∅=á:l–é:
tsę̂: pa̧hɨ́: ∅=ál+dɔ́: **mɔ́n** há:têl ∅=ál–é:
horse clearly 3SGS=move+be **INFER** person:INDEF 3SGA:3SGO=move–PFV
'Clearly the horse has moved; maybe somebody chased it.'

Most of the time /mɔ́n/ is used without modal inflection, but it is compatible with it when the sentence is about the future or about generic usage. However, /mɔ́n/ is never compatible with hearsay inflection, even in contexts that are clearly hearsay for modern speakers, like mythical stories or long-ago histories. In (14), a Kiowa man tells a story about an incident. The sentences expressing propositions that he knows carry hearsay marking because the source is reliable (a, c), while those that require inference contain /mɔ́n/ and not hearsay inflection, even though the narrator was also told them, but their source is not as reliable (b). Moreover, the way the incident is described, the narrator could not have been there and only witnessed one half of the action and not the other.

(14) Excerpt from "Poolant's Killing" (McKenzie et al. 2022: S131)

a. nɔ̨̀ hǫ́ndéʔ+tʰàlí: ∅=pɔ̀:+kʰɔ̂:+tòl–**hèl**
nɔ̀ hɔ́ndé$_*$+tʰàlí: ∅=pɔ̀:+kʰɔ̂:$_*$+tól–**hêl**
and.DF thing:INDEF+boy 3SA:3SO=bring$_C$+get$_C$+send.PFV–**HSY**
'so he [Poolant] sent a boy to go get it [his horse],'

b. nɔ̨̀ **mo̧n** ∅=ɔ́:gɨá+tɔ̀:
nɔ̀ **mɔ́n** ∅=ɔ́:gá$_*$+tɔ́:
and.DF **INFER** 3SGS=refuse to relinquish+act.PFV
'but he [the White man] refused to give it up'

c. nɔ̨̀ hègɔ́ ǫ́:gɔ̀ gɨà=ʔâj–**hjèl**
nɔ̀ hègɔ́ ǫ́:gɔ̀ gà=âj$_*$–**hêl**
and.DF then SELF 3SGA:3PLO=start off.PFV–**HSY**
'so he [Poolant] went to get it himself.'

Outside of texts, the restriction on hearsay marking holds as well. In elicitations, /mɔ́n/ with hearsay inflection is swiftly and strongly rejected.

Context:
You were told that Bill has to work until 8, and it is 7:30. I ask where Bill is and you tell me:

(15) * Bill **mɔ̨́n** hétɔ́ gʲà=sɔ́ːtè+**tɔ̀ːj**–ìː
Bill **mɔ́n** hétɔ́ gà=sɔ́ːtè$_*$+**tɔ̂j**–íː
Bill INFER still 3SGA:3PLO=work+act(IPFV)–HSY$_{IPFV}$
'Bill is still at work.'

It is common for /mɔ́n/ to occur multiple times in a sentence, even after the verb, but the additional /mɔ́n/'s do not affect the strength of the modal.

(16) ɔ̨́nkʼîː **mɔ̨́n** ɔ́–j–hjɔ̀–dè kʼʲą́ːhî̱ː **mɔ̨́n** tsóːl–ɔ̀ː **mɔ̨́n** há–já=àl
ɔ́nkʼîː **mɔ́n** ɔ́–j–hɔ̀ːꜛ–dé kʼą́ːhî̱ː **mɔ́n** tsól–hɔ̀ː **mɔ́n** há–já=àl
in the past **INFER** DISC–VAGUE–DEF–BAS man **INFER** thus–DEF **INFER** some–way=also
á=pɔ̂ː–jà–kʲà
á=pɔ̂ːꜛ–já–ká
3SGD:3SGS=get$_{IPFV}$–IPFV–SURMISE
'I suppose that back then, that man [Satanta] would get it any way he could' (McKenzie et al. 2022: S107)

1.2.1.2 /pàhí̱ː/ 'clearly, definitely'

The strongest epistemic modal is /pą̀hí̱ː/, which expresses a complete certainty, reflected in its translations 'clearly', 'obviously', 'very likely', or 'definitely'.[6]

(17) ɔ́–j–hjɔ̀ː–dè+pèː=dò ę́ː–dè kút **pą̀hí̱ː** gʲà=sɔ̂y+ɔ̨́m–gʲà
ɔ́–j–hɔ̀ːꜛ–dé+péː=dò ę́ːꜛ–dé kút **pàhí̱ː** gà=sɔ̂yꜛ+ɔ́m–gá
DIST–VAGUE–DEF–BAS+direction=because PROX–BAS letter **clearly** 3PLS=fast+make–DETR:PFV
páː–gɔ̀ː+kʰìː
páːꜛ–gɔ́ː+kʰíː
one–only+day
'On account of that, this letter very likely will be delayed a day.'[7] (Letter to Laurel Watkins, Oct 4, 1987. Parker McKenzie Archive, Box 21 Folder 5 pg 103)

The certitude can be augmented by a degree modifier; in (18), the degree modifier /hégɔ́bɔ́y/ indicates an absolute level of certainty.

(18) hégɔ́bɔ́j+**pą̀hí̱ː** ę̀m=pʰólaʔk–òp
hégɔ́bɔ́jꜛ+**pą̀hí̱ː** èm=pʰólátk–òp
extremely+**clearly** 3SGA:REFLO=tell lies–IPFV$_{VT}$
'He is clearly lying.' (McKenzie et al. 2022: S190)

Watkins (1984:220) indicates that /pą̀hí̱ː/ must occur with a verb in the bare perfective form, however it occurs with the imperfective in (18), and elsewhere. It does not occur with modal inflection, even when about the future.

1.2.1.3 /bá:tsòl/ 'must be'

This rare form accompanies a reported epistemic state. Parker McKenzie lists it as an alternative form of /bá:tsò/, which he does not define except as 'prefacing particle that seems to denote "in the belief of" (disyl 39). McKenzie et al. (2022) gloss it as 'must.be' in (19), which recounts a person's thoughts. These thoughts happened to be incorrect, but the statement is still true. This kind of false belief is another sign of modality: The propositions that follow from our own knowledge may not be true in the actual world.

(19) "n~ ~ègɔ́ **bá:tsòl** ɔ́–j–hjɔ̀–dè+kʼìː ∅=hɔ̨́ndé+dɔ̀ːꜛ," ∅=ɔ̨́ːd–êː gɔ̀
nɔ̀ hègɔ́ **bá:tsòl** ɔ́–j–hɔ̀ːꜛ–dé+kʼíː ∅=hɔ́ndéꜛ+dɔ́ː ∅=ɔ̨́d–êː gɔ̀
and.DF then **must be** MED–VAGUE–DEF–ADV+male 3SGS=thing:INDEF+be 3SGS=think$_{IPFV}$–HSY$_{IPFV}$ and.SA
∅=kûːtɔ̀ː+pʼàjdè–hèl
∅=kûːtɔ̀ːꜛ+pʼájdé–hêl
3SGS+struggle+fight$_{(ASP)}$.PFV–HSY

[6] The adverb /pą̀hí̱ː/ derives from a stative verb meaning 'be easily visible'.
[7] This is Parker McKenzie"s own translation.

'It's another one of those men," she thought, and began to struggle hard. (McKenzie et al. 2022: S52)

1.2.2 Epistemic possibility

Epistemic possibility modals indicate the speaker's inference that something may be true based on what they know. Formally we describe these as an existential quantifier over possible worlds. That is, in *some* worlds where the best of my knowledge is true, the proposition is true. As such, epistemic modals are often used as hedges in discourse. Possibility modals can also be adjusted in terms of strength using domain restriction. In contrast with necessity modals, shrinking the domain strengthens a possibility modal. If the proposition is true in just one possible world out of a big group, the odds for the actual world being that world are low. The smaller the group, though, the better the odds that the actual world will be that true one. Think of it like a lottery: The fewer people buy tickets, the better each person's odds are.

1.2.2.1 /hàgà/ 'maybe'

The common adverb /hàgà/ 'maybe' indicates an epistemic possibility of weak to moderate strength. For instance, in (20), it is used because the speaker does not know whether the boy has been found.

(20) tʰàlí: á=dǫ́n–mǫ̀ gɔ̀ **hàgʲà** á=tʰǫ̀n
tʰàlí: á$_*$=dón–mɔ̀ gɔ̀ **hàgà** á$_*$=tʰɔ̂n
boy 3EMPA:3SGO=look for–IPFV$_{VT}$ and.SA **maybe** 3EMPA:3SGO=find.PFV
'They were searching for the boy and may have found him.' (Watkins 1984: 221)[8]

The use of /hàgà/ always opens the door for other possibilities. This is likely how /hàgà/ came to be used for disjunction as well (see chapter X). We can predict that cannot be used when the situation is impossible (21), and that prediction holds.

Context:
You know that Tom is not at the store, because you just saw him at work.

(21) # hàgʸà Tom kǫ́:tɔ̀+tò:–kʸà ∅=dɔ́:
hàgà Tom kǫ́:tɔ̀$_*$+tó:–ká ∅=dɔ́:
maybe Tom shop+house–at 3SGS=be
'Maybe Tom is at the store.'

Speakers clearly distinguish /hàgà/ from /mɔ́n/ in elicitations, noting that /mɔ́n/ indicates that the speaker is more sure about the information.

1.2.2.2 /hén/+ 'possibly'

/hén/ 'possibly' is an obligatorily bound stem that indicates a fairly small degree of epistemic possibility. It is usually accompanied by the free adverb /mɔ́:/ 'somewhat', which lowers the degree of certainty. This led (Watkins 1984: 225) to gloss this as 'dubitative'. Parker McKenzie, in his notes, defines it consistently as 'possibly' or 'maybe', and the following instance from a narrative involves /hén/ relating the protagonist/speaker's affirmative decision. In it, a turkey hiding from the trickster Séndé pretends to be a burnt tree stump. Séndé passes by it, then later he suddenly realizes what it was before turning back to hunt it.

(22) ∅=pʰǫ́:–hèl gɔ̀ ∅=tǫ́:n–ê, "pê: mǫ́: ∅=**hǫ́n**+dɔ:!"
∅=pʰǫ́:$_*$–hêl gɔ̀ ∅=tǫ́n–ê, "pê: mɔ́: ∅=**hén**$_*$+dɔ:!"
3SGS=stop.PFV–HSY and.SA 3SGS=say.IPFV–HSY$_{IPFV}$ turkey somewhat 3SGS=**possibly**+be
'He stopped and said, "I think that was a turkey!" (Toyebo 1962: 10)[9]

[8] This example has been slightly updated to correct some tone markings.
[9] In the text itself this is translated into a colloquial English as "I think I saw a turkey!"

Parker McKenzie writes of a conversation he had with his aunt Ilene Queton. Parker brought up an old name for the Kiowas, /kʰòmpɔ̀+bɧ̨ː–dɔ̀/ 'tipi flap+big\PL–INV' or the 'Big Flaps'. Talking about the word's exact tone pattern, she remarked without great certainty:

(23) tsɔ̂ː mɧ́ː ą̀n bá=**hɧ́n**+tɧ̨ː–gɨàː
tsɔ̂ː mɔ́ː àn bá=**hén**$_*$+tɧ́ː–gàː
thusly somewhat HAB 3NSGS=**possibly**+speak–IPFV$_{VI}$
'I believe that is the way it is rendered'[10](Letter to Laurel J. Watkins, Mar 17, 1979. PMA Box 21 Folder 2 Pg 22)

Without /mɔ́ː/ the modal is a bit stronger, but rarer. Like other epistemic modals, /hén/ is speaker-oriented and therefore indicates what the speaker thinks. Since it indicates a fairly weak possibility, it is often translated as 'I think'. Even though /hén/ is always incorporated into the verb, it takes scope over the entire proposition. A negated sentence with /hén/ means 'possibly not', rather than 'not possibly'.

(24) hɧ́n gɨà=**hɧ́n**+sɔ̀ːtè+pʼàj–gɔ̀ː
hɔ́n gá=**hén**$_*$+sɔ́ːté+pʼáj–gɔ̂ː
NEG 3SGA:3PLO=**possibly**+work+fight(PFV)–NEG
'I don't think he has a job.' / 'I doubt he's working.'

1.2.3 Strong possibility / Weak necessity

Sometimes, strong possibility is barely distinguishable from weak necessity. Possibility modals weaken to the point that the speaker does not really believe the proposition to be true, but only accepts that it is not impossible.

1.2.3.1 /hájáttò/ 'maybe (prediction)'

A weaker necessity is expressed with /hájáttò/ 'maybe, perhaps', which skirts the line between weak necessity and strong possibility; we could place this word in that section instead. This breadth is shown in (25–26), where /hájáttò/ is translated within the same text as 'likely' and 'possible'; in fact, within two consecutive sentences. The translations are by the writer himself, so we are confident that they accurately reflect what he had in mind.

(25) kɔ̂l=àl **hájáʔtò** á=tóːtè–tɔ̀ː nɧ̨̀ hègɔ́
kɔ̂l=àl **hájáttò** á=tóːtè$_*$–tɔ́ː nɔ̀ hègɔ́
some\IRR=also **perhaps** 3EMPA:3SGO=gather.PFV–MOD$_{VT}$ and.DF then
gʸà=tʰɧ́ː+ɧ̨̀ː–tɔ̀ː
gʸà=tʰɧ́ː$_*$+ɧ́ː–tɔ́ː
1SGA:3EMPA:3SGO=send$_C$+give.PFV–MOD$_{VT}$
'More money will likely be collected and then I can send it to them.'

(26) **háyáʔtò** mɧ́ː+tɔ̀ːdè gʸà=tʼɔ́ː+ɧ̨̀m–dè–tʼɔ̀ː
háyáttò mɔ́ː$_*$+tɔ́ːdè gà=tʼɔ́ː$_*$+ɔ́m–dé–tʼɔ́ː
perhaps somewhat+long time 3EMPD:3PLS=stay+make$_{DETR}$–DETR.PFV–MOD$_{VI}$
'It is possible they may have to remain much longer' (McKenzie et al. 2022: S185)

Sentences with /háyáttò/ require the modal inflection on the verb. In essence, /háyáttò/ reflects the speakers judgment about how likely it is that things will turn out a certain way from the topic time.[11] This can also involve statements about the present going forward, like (27), which is in a narrative about Kiowa warriors on the run from soldiers. As they woke up in camp they came to a conclusion:

[10]This is Parker's translation in the letter.

[11]The adverb /háyáttò/ is clearly derived from the form /háyá–tò/ 'by some means, in some way', but speakers do not decompose it that way in these kinds of sentences.

(27) **hájáʔtò** hétɔ́ dɔ́=tɔ́ːą̀ː–tɔ̀ː mɔ̨́n bá=ɔ̨́n gɔ̀
hájáttò hétɔ́ dɔ́=tɔ́ːą́ː$_*$–tɔ́ː mɔ́n bá=ɔ́n gɔ̀
perhaps still 3INVA:1NSGO=pursue hither.PFV–MOD$_{VT}$ INFER 3PLS=think.PFV and.SA
gʲá=ɔ̀j+àj–hjèl
gá$_*$=ồj+âj–hêl
3EMPS:3PLO=again+start off.PFV–HSY
"They might still be in pursuit," they probably thought. Once more they took flight." (Palmer, Jr. 2013: 417)

It is difficult to elicit exact judgments of probability with adverbials like /háyáttò/. However, speakers do rate /mɔ́n/ as being stronger or reflecting more certitude than /háyáttò/.

1.2.3.2 /kòttè/ 'liable to'

One strong possibility adverb is /kòttè/ 'liable to', which indicates a fairly strong possibility. It does not trigger modal inflection, even when used to make predictions about the future.[12]

(28) **kòʔtè** [ą́m sę́ndé tsáː–gɔ̀ é=tsʼą̀ːn+hól–hèl gɔ̀
kòttè ám séndé tsáː$_*$–gɔ́ é=tsʼàn+hól$_*$–hêl gɔ̀
liable to ANAPH Séndé prairie dog–INV 3SGA:3INVO=deceive+kill.PFV–HSY and.SA
é=ɔ́l+tʼɔ́dǫ̂m–hèl=dé–tsò] éːzę̀n tsồː dɔ́=**ɔ̨́ːm–éː** há–bé
é=ɔ́l+tʼɔ́dồm$_*$–hêl=dé–tsò éːzę̀n tsồː dɔ́=**ɔ́m–éː** há–bé
3SGA:3INVO=head+smash in.PFV–HSY=BAS–like Agent thusly 3SGA:1NSGO=**do**–**PFV** INDEF–along
tʼó+péː–jồː
tʼó+péː–jồː
future+direction–in
'It could be that the agency will do to us in sometimes in the future, like Sende when he tricked the prairie dogs and then beat them over the head.' (McKenzie et al. 2022: S189)

1.2.4 Epistemic unlikelihood or impossibility

Kiowa has a number of expressions of unlikelihood or impossibility, which do not seem to derive from the negation of a positive modal (the way English *un–likely* is derived). These can be considered negative quantifiers, which are true if the proposition holds in none of the (best) possible worlds. The more worlds that are included, the stronger the unlikelihood.

1.2.4.1 /bèthêndè/ 'unlikely, doubtful'

The adverb /bèthêndè/ 'unlikely, doubtful' indicates epistemic unlikelihood or impossibility that things will turn out a certain way. It requires the modal inflection, and a non-negative verb, because it only applies to predictions about the future from the topic time.[13] If the topic time is in the past, we can get a 'would' reading about a time that is future from then, but in the past of today.

(29) **bèːtʰę̂ndè** kúːtò+hjɔ̨̀j bétbɔ́ː–tɔ́ː
bèthêndè kúːtò$_*$+hjǫ̂j bétbɔ́ː–tɔ́ː
unlikely bird+genuine.INV 1INCLA:3INVO=see.PFV–MOD$_{VT}$
'I doubt we'll see any eagles.' / 'It was unlikely we would see any eagles.'

Harrington (1928) gives the meaning of /bèthêndè/, which he transcribes as [bei-tʻęį'n-dei], as 'never'. However, his examples involve the modal marking in the future, and do not all involve 'never'.

[12] This adverb should not be confused with /kóttè/ 'strongly, swiftly'. It seems to be derived historically from some lost stem /kòt/ bearing the adverbial affix /té/ 'ADV'.

[13] A variant of *bèthêndè* is /bòt.hêndè/.

(30) tó: **bè:tʰę̨́ndè** ∅=ɔ̨́m–dé–t'ɔ̀:
tó: **bèthêndè** ∅=ɔ́m–dé$_{*}$–t'ɔ́:
house **unlikely** 3SGS=make$_{detr}$–DETR.PFV–MOD$_{vi}$
'The house will never be finished.' (Harrington 1928: 42)

For expressing the unlikelihood of an actual event in the past or present, /mɔ́n/ is used with negation (31). No matter what the word order is, /mɔ́n/ takes scope above negation, so the result is that the prejacent 'must not' be true, rather than that it 'does not have to' be true.

(31) hɔ̨́n **mɔ̨́n** ą́m à=dɔ̨́:–mɔ̨̂:
hɔ́n **mɔ́n** ám à=dɔ́:–mɔ̂:
NEG **INFER** you 1SGS=be–NEG
'I'm not you, I guess.' (McKenzie et al. 2022: S143)

(32) **mɔ̨́n** hɔ̨́n gɔ̀=bɔ̨́:–mɔ̨̂:
mɔ́n hɔ́n gɔ̀=bɔ́:–mɔ̂:
INFER NEG 3SGA:2SGO=see–NEG
'I don't think he saw you.'

1.2.4.2 /ádàltè/ 'unlikely'

One final epistemic modal listed in Parker McKenzie's files is /ádàltè/ 'unlikely', but this is not attested elsewhere and could not be elicited.

1.2.5 Wide scope of epistemic modals

Modal expressions take scope over other elements, including each other. Their analysis as quantifiers over possible worlds naturally explains their scope-taking nature. For instance, the modal in *Ellen must not leave* takes scope over the negation (must > not), while in *Ellen doesn't have to leave* it takes scope beneath it (not > must). A lot of interesting observations can be made by comparing a modal's scope to negation, to other modals, or to quantified nominals.

Epistemic modals are cross-linguistically known for having wide scope with respect to negation and root modality, and most quantifiers in a sentence (von Fintel & Iatridou 2003). In Kiowa, epistemic modals work this way. Most of them are adverbials that tend to be placed toward the left edge of the clause.

Some of them, however, are more flexible in placement but not in scope, raising interesting questions about their nature. The epistemic certainty modal /mɔ́n/ (§1.2.1.1). For instance, in (33), from a story featuring the trickster Séndé, Séndé is trying to get a horse to go, but thinks it is balking because it does not recognize his owner on him. The modal /mɔ́n/ is located inside the negation phrase, but takes semantic scope outside it: In all the worlds where his information is true, the horse does not recognize him.

(33) hɔ̨́n mɔ̨́n ą́m à=dɔ̨́:–mɔ̨̂: nɔ̨̀ gɔ̀=tɔ́:bà
hɔ́n mɔ́n ám à=dɔ́:–mɔ̂: nɔ̀ gɔ̀=tɔ́:bà
NEG INFER 2 1SGS=be.NEG and.DF 3SGA:2SGO=look at
'I'm not you, I guess, and he's watching you.' [must > not] (McKenzie et al. 2022: S148)

1.3 Root modality

The term **root modality** applies to modal expressions that describe alternate results of how an event might turn out given facts that constrain or permit what happens. For instance, *Tom has to go home* indicates a strong necessity or obligation that Tom should meet, while *Tom can go home* simply indicates a possibility.

1.3.1 Types of root modality

Root modals can be further subdivided based on the particular set of facts that serve as the source of that obligation or possibility. Tom might have to go home because of a curfew rule at his dorm, or because his parents want him to, or because his show is coming on and he wants to see it. These sets of facts are usually assigned to distinct modal bases, or more frequently now, as ordering sources that restrict the broad set of circumstances that feed root modality.

Deontic modality describes modals that are based on rules, regulations, laws, ethics, or customs. You have to stop at a red light. You can't fish here. You need to clock in at 8 o'clock, and so on. Deontic modals are associated with obligation and permission.

Bouletic modality describes modals based on the wishes of a relevant person, usually the speaker. You have to come out with me tomorrow. You should visit more often. You may rub my shoulders. Bouletic modals are associated with wishes and consent.

Teleological modality describes modals based on achieving a goal. You have to take Highway 9. You ought to enroll in 320. You can get a C and still advance. Teleological goals are associated with requirements and pathways.

We will follow Portner (2007)'s approach of grouping the above types together as "priority" modals, which essentially relate the priorities of some party concerning the situation at hand. These behave in similar ways in many languages, and in Kiowa they often behave alike as well.

Dynamic modality describes modals based on the sentential subject's internal capacities or dispositions, as applied to a situation. This complexity makes their analysis tricky, and languages sometimes differ on how they express these, depending on whether the action actually happened or not.

Circumstantial modality describes modals based on a selected set of relevant facts about the world. You have to stop because you have a flat tire. You can sit outside because it's sunny. You should take the turnpike because the highway is under construction. Circumstantial modals are sometimes hard to distinguish from ability modals.

1.3.2 Inferred root modality

Root modals are particularly difficult to investigate in Kiowa because many times they have to be inferred from a non-modal expression. For instance, there is no distinct morpheme to use to tell someone they *have to* do something, or that they *should* do it. Usually speakers use the imperative, with or without *dá* or *dáàl* to strengthen it (34a), or the modal inflection (34b). See §1.6.1.2 for more details. For general requirements they may use the habitual.

(34) Context: We are in the Elders Center and they are about to close it.

a. Prompt: 'We have to leave now.'

ɻ́ː–hɔ̀ː–gɔ̀ː (dá) bà=kó+kʰìː
ɻ́ː–hɔ̀ː$_*$–gɔ́ː (dá) bà=kó$_*$+kʰíː
PROX–DEF–during (ABS.NEC) 1INCLS=right now+exit.PFV.IMP
'Let's leave right now.'

b. Prompt: 'We should leave now.'

ɻ́ː–hɔ̀ː–gɔ̀ː bà=kó+kʰìː–tʼɔ̀ː
ɻ́ː–hɔ̀ː$_*$–gɔ́ː bà=kó$_*$+kʰíː–tʼɔ́ː
PROX–DEF–during 1INCLS=right now+exit.PFV–MOD$_{VT}$
'We should leave right now.'

There are also no simple ways to express abilities. Usually, people use forms that entail an ability, like saying they know how to do it. We can test for an ability modal with a context that rules out circumstances external to the subject. See §1.4.3 for more details.

(35) **Context:**
We are in the Elders' Center about to serve food and we need someone able to cook to make it, with all these ingredients and equipment.

Prompt: 'Bill can cook.'

a. Bill ą́n=pį́:+ɔ̨́m+háj–gi̱à+dɔ̀:
Bill án=pį́:+ɔ́m+háj$_*$–gá+dɔ́:
Bill 3SGD:3PLS=food+make+inform–DETR+be
'Bill knows how to cook.'

b. Bill ą́n=pį́:+ɔ̨́m+mɔ̨́:gɔ́
Bill án=pį́:+ɔ́m+mɔ́:gɔ́
Bill 3SGD:3PLS=food+make+be skilled
'Bill is a good cook.'

Given this significant lexical gap, eliciting for root modals can prove difficult both for practical and social reasons. Some speakers get flustered if they cannot find a single form to help the linguist translate from the English, while others seem concerned that they might have forgotten an important word. However, we can be certain that the speakers did not forget anything, because we observe no such morphemes in old narratives and documentation, even as far back as speakers working with Gatschet (n.d.), Mooney (1896), or (Harrington 1928).

Sentences in these older sources that have been translated into English with root modals, even by Kiowas like Parker McKenzie, do not show direct root modality in the Kiowa. For instance, in McKenzie's translation of the story of the Cutthroat Massacre, we find the following statement, said by a band leader telling his people it is time to get a move on. The English translation contains *need to*, but the Kiowa sentence has the imperative.

(36) nɔ̨́: hóldé **bá=mɔ̨̀:** gɔ̀ k'óp+pé:–gù
nɔ́: hóldé **bá$_*$=mɔ́:** gɔ̀ k'óp+pé:$_*$–gú
1 soon **1INCLA:3SGO=move camp.PFV\IMP** and.SA mountain+direction–to
bà=hó:+bà: bôt mą̀:jį́: mɔ̨́: ę́=mɔ̨́ɔ́jbé
bà=hó:$_*$+bá: bôt mà:jį́: mɔ́: ę́=mɔ́ɔ́jbé
1INCLS=vehicle+go.PFV\IMP because woman somewhat 1SGD:3SGS=be in difficulty
'We need to decamp right away and head to the mountains, because my wife is having some difficulties [soon to give birth].' (McKenzie et al. 2022: S42-43)

We point out that that one must not draw 'Whorfian' conclusions here. The lack of certain modal morphemes does not mean that Kiowa speakers lack or ever might have lacked the notions of obligation and ability. The history and culture of the tribe show very clearly that they always did and still do; so does spending five minutes with modern Kiowas. What we do observe is that the way that Kiowa packages modal meanings differs from the English, and that this difference affects elicitations and translations.

1.4 Root possibility

Root possibility modals indicate that some of the possible outcomes will lead to the event taking place, given the selected circumstances. Formally, these are existential quantifiers over possible worlds, and in some worlds where the modal base holds, the prejacent holds. In this section we discuss root possibility modals organized by flavor into the broad categories of priority modals that indicate various conditions on actions, and dynamic modals that indicate internal capacities and abilities, or the lack thereof.

1.4.1 Priority possibility

1.4.1.1 /t^{h}énts'ò/ 'permitted'

The bound stem /t^h énts'ò/ 'permitted' expresses deontic or bouletic possibility: based on the rules or wishes of a person, it is possible. This is translatable to permission. It cannot describe abilities or circumstantial possibilities.

The stem is bound, so it must incorporate with a welcoming verbal stem that gives a stative or active sense of permission. While it can incorporate with other predicates, the common ones are in (37). The active forms are discussed in §1.4.2.1.

(37)	welcoming stem	result	usual English translation
	+ /dɔ́ː/ ‘be’	tʰénts’ò$_*$+dɔ̀ː	‘be able to’
	+ /ɔ́m/ ‘make, do, cause’	tʰénts’ò$_*$+ɔ̨̀ːmèː	‘allow, permit’
	+ /ɔ́mgʲà/ ‘become, make.DETR’	tʰénts’ò$_*$+ɔ̀mgʲà	‘be allowed, become able’

To express a state of permission, /tʰénts’ò/ is incorporated onto the stative verb /dɔ́ː/ ‘be’. This appears to be a standard result stative (Ch. XX), although /tʰénts’ò/ cannot be a main verb.

(38) **Context:**
You have family over, but don’t want the grandkids running around over by the windows. You show their parents where you are letting them play.

Prompt: ‘The children can play over there.’

ɔ́ː–gɔ̀ː są̂ː–dɔ̀ gʲá=jáyj+**tę̀nts’ò**+**dɔ̀ː**
ɔ́ː–gɔ̀ː są̂ː$_*$–dɔ́ gá=jáj$_*$+**ténts’ò**+**dɔ́ː**
MED–PRS child$_{INV}$–INV 3EMPD:3PLS=play+**allow**+**be**

Lit: ‘it is play+permitted to the children’

(39) hǫ́n yą́=kų̂n+**tʰę̀nts’ò**+**dɔ̨̀ː**–**mɔ̨̀ː**
hɔ́n yą́=kûn$_*$+**tʰénts’ò**+**dɔ́ː**–**mɔ̂ː**
NEG 1SGD:3PLS=dance$_C$+permit+be–NEG

‘I am not allowed to dance.’

This allowance is generally deontic in nature, but can also be bouletic, for instance, (39) is felicitous if a society is dancing and I am not in it (deontic), or if I’m a terrible dancer and nobody wants to see me dance, so they don’t let me (bouletic). However, its use is false if I mean to say simply that I am a terrible dancer.

General or arbitrary permission (i.e. anyone can) still grammatically requires the permittee to be expressed in agreement. As is common with arbitrary agreement in Kiowa, the empathetic plural is used in such cases.

(40) ę́ː–hɔ̀ː ą̀n **gʲá**=k’ù:+tʰę̀nts’ò+dɔ̀ː
ę́ː–hɔ̀ː àn **gá**$_*$=k’ú:+tʰénts’ò+dɔ́ː
PROX–DEF HAB **3EMPD**:3PLS=camp$_C$+permit+be

‘It is permitted to live here.’

It is fairly simple to show that /tʰ énts’ò/ cannot be epistemic: In a context where the subject is known not to be doing an action yet is permitted to do so, a deontic possibility meaning should be available while an epistemic one should not be. That is the case in the follow-up context in (41).

(41) hǫ́n ę̀m=gų́ːn–ǫ̨̀ː né ą́n=**tʰę́nts’ò**+**dɔ̀ː**
hɔ́n èm=gún–ǫ̨̀ː né án=**tʰénts’ò**$_*$+**dɔ́ː**
NEG 3SGA:REFLO=dance–NEG but 3SGD:3PLS=**permit**+**be**

‘He is not dancing, but he is allowed to.’

1.4.1.2 /kʰôl/ ‘allowed’

Less commonly, /kʰ ôl/ expresses deontic permission, and especially permission linked to social mores, honors, and privileges. In Kiowa culture it is common for certain songs, dances, and religious items to be reserved for a certain person or certain people. When a person meets the criteria for that reservation, or if those cultural items are not reserved, then that item is /kʰ ôldɔ̀ː/ for the person. More recently the term is also used for legal permission. Poolaw’s glossary 2022 lists tax deductions as one example.

(42) hǫ́n já=kų̂n+**kʰòl**+**dɔ̀ː**
hɔ́n já=kûn$_*$+**kʰôl**+**dɔ́ː**
NEG 1SGD:3PLS=dance$_C$+**allow**+**be**

‘I am not allowed to dance’ (it is not my place to dance that)

The stem is bound, so it must incorporate with a welcoming verbal stem that gives a stative or active sense of permission. The active forms are discussed in §1.4.2.

(43)

welcoming stem	result	usual English translation
+ /dɔ́ː/ 'be'	kʰôl$_*$+dɔ̀ː	'be able to'
+ /ɔ́m/ 'make, do, cause'	kʰôl$_*$+ɔ̨̀ːmèː	'allow.PFV'
+ /ɔ́mgʲà/ 'become, make.DETR'	kʰôl$_*$+ɔ́mgʲà	'become permitted'
+ /hɛ́ː/ 'lacking'	kʰôl$_*$+hɛ̀ː	'not allowed' (non-verbal predicate)

1.4.2 Causing possibility

A number of stems express causing possibility. In such cases, these describe events the result of which is a possibility modal. Caused possibility comes out as granting permission or letting things happen.

1.4.2.1 possibility+/ɔ́m/

The active granting of permission is most often expressed by incorporating the stem /tʰénts'ò/ (§1.4.1.1) onto the causative verb /ɔ̨́m/ 'make'. The result is a transitive verb, whose agent is the grantor of permission, whose object is what is permitted (actions are 3PL), and whose dative argument is the entity permitted.

(44)
ɔ̨nk'îː há–bé gʲà=dɔ́ː=ɛ̀ː kɔ́j–gú gɔ̀ kʲâj–gù gɔ̀ tʰɔ̀gûj
ɔ̨nk'îː há–bé gà=dɔ́ː=ɛ̀ː kɔ́j–gú gɔ̀ kâj$_*$–gú gɔ̀ tʰɔ̀gûj
in past INDEF–SPRD 3PLS=be=when:DF Kiowa–INV and Comanche–INV and Plains.Apache\INV
gʲá=k'ùː+**tʰɛ̀nts'ò**+**ɔ̨̀ːm**–**ɛ̀ː** t'ɔ́kʰɔ̂j
gá$_*$=k'úː+**tʰénts'ò**+**ɔ́m**$_*$–**éː** t'ɔ́kʰɔ̂j
3EMPA:3EMPD:3PLO=camp+permit+make–PFV White\INV
"It was during a former time when Kiowas and Comanches and Apaches (3EMP) permitted the White people (3EMP) to settle here (3PL)." (McKenzie et al. 2022: S165)

This transitive verb is often used to describe medicine or religious powers, where it is translated as 'grant', or in legal contexts as 'authorize'.

(45)
hɔ̨́ndé gʲáʔ=**tʰɛ́nts'ò**+**ɔ̨̀ːm**–**ɛ̀ː**=dè dɔ̀ːkʲà+íː ∅=dɔ́ː
hɔ́ndé gát=**tʰénts'ò**$_*$+**ɔ̂m**–**êː**=dè dɔ̀ːk'à+íː ∅=dɔ́ː
thing\INDEF 3SGA:1NSGD:3PLO=**allowed**+**make.IPFV**–**HSY$_{IPFV}$**=BAS God$_C$+offspring 3SGS=be
'It is Christ who grants us things.' (Redbird et al. (1962), No. 16)

The detransitive form of /ɔ́m/, /ɔ́m–gá/ 'make–DETR.PFV' is used to indicate being granted permission, or becoming allowed.

(46)
ɛ́ː–hɔ̨̀–dè+dɔ̨̀m+tʰàj ją́=**tʰɛ́nts'ò**+**ɔ̨̀m**–**gʸà**
ɛ́ː–hɔ̨̀ː$_*$–dé+dɔ́m+tʰáj ją́=**tʰénts'ò**$_*$+**ɔ́m**–**gá**
PROX–DEF–ADV+land+upon 1SGD:3PLS=**allowed**+**make**–**DETR.PFV**
'I was allowed onto this land.' (Mamie Wolf, SIL recording)

A similar form with /kʰ ôl/ is rarely used, but indicates the granting of permission in ways to which /kʰ ôl/ applies.

(47)
tʰɔ̨̀ː+kʰɔ̨̀ː+gɔ̀t gʸâː=kûn+**kʰɔ̀l**+**ɔ̨̀ːm**–**èː**
tʰɔ̨̀ː+kʰɔ̨̀ː+gɔ̀t gâː$_*$=kûn+**kʰôl**+**ɔ́m**–**éː**
leg$_C$+black.INV 3EMPA:1SGD:3PLS=dance$_C$+**allowed**+make–PFV
'The Black Leggings allowed me to dance this.'

1.4.2.2 /dɔ́:pé:/ ‘ask’

The verb /dɔ́:pé:/ ‘ask, order’ is sometimes used to indicate granting permission. The standard lexical entry for this verb clearly involves asking or ordering someone to do something. However, sometimes it (or a homophonous form) can be used for possibility modals.

One instance of this is found in a narrative passage where one man locks another in a public restroom and will not let him leave until he drinks a bottle of whiskey. The gloss of ‘ask’ or even ‘order’ makes no sense.

(48) ∅=tǫ́:n–ę̂: $t^hǫ́$:+ɔ́l$k^hɔ́$y $g^yà$=dó:=dè kồl à=$t^hǫ́$: n∼
∅=tǫ́:n–ê: $t^hǫ́$:+ɔ́l$k^hɔ́$y gà=dó:$_*$=dé kồl à=$t^hǫ́$: nɔ̀
3SGS=say.IPFV–HSY_{IPFV} water+wicked 1SGA:3SGO=have=BAS some\IRR 2SGA:3SGO=drink.PFV\IMP and.DF
ègɔ́ hèg∼ ę̂m=$t^hép$+**dɔ̀:pè**–tɔ̀:
hègɔ́ hègɔ́ èm=$t^hép_*$+**dɔ́:pé**–tɔ́:
then then 1SGA:2SO=$exit_C$+**permit.PFV**–MOD_{VT}
‘He said, “Drink some of this alcohol I’ve got, and then I’ll let you out.”’ (McKenzie et al. 2022: S226–227)

Consultants affirm the ‘let’ meaning, and in elicitation, they say that this sense is fine out of the blue for a meaning of /dɔ́:pé:/.

1.4.2.3 /kɔ́n/+ ‘let’

Another stem involving the granting of permission is /kɔ́n/+, ‘let’. This is a bound stem that Watkins (1984: 225) glosses as ‘permissive’. This gloss is broadly accurate. Specifically, we observe that /kɔ́n/+ indicates a caused bouletic possibility on the part of the *addressee* rather than the speaker. The addressee is bid to allow the event to happen, or at least should not stand in the way when they could.

The stem is incorporated onto a main verb that is inflected with the perfective and no modal inflection, even though there is a future-orientation to the modal; the speaker is telling the addressee to not stop a event that has yet to happen. The agreement on the verb reflects the arguments of the main verb, not an incorporated one.[14]

(49) tségùː–dɔ̀ è=**kɔ̨̀n**+hèːbà
tségùː$_*$–dɔ́ è=**kɔ́n**$_*$+héːbà
dog_{INV}–INV 3INVS=**let**+enter.PFV
‘Let the dogs in.’

(50) kíː ét=**kɔ̨̀n**+pɔ̀ː–$g^yà$ː
kíː ét$_*$=**kɔ́n**+pɔ́ː–gáː
meat 3INVA:3PLO=**let**+eat–PFV
‘Let them eat the meat.’

(51) è=**kɔ̨̀n**+kìː+pį̀+hèːbà
è=**kɔ́n**$_*$+kíː+pį́ː+héːbà
3INVS=**let**+meat+eat+enter.PFV
‘Let them come in to eat meat.’

Because of this usage, this marker’s usage can also be translated with a simple possibility modal (‘they can come in’). This is a conventional implicature of telling someone to let it happen.

The action the addressee takes to allow the event to take place can be direct, like in (49) or very indirect, like in (52), where the letter-writer suggests showing other Kiowas how they write to each other, so that they in turn might take it up.

(52) á=**kɔ̨̀n**+k’ɔ̨̀mbàà?$k^yà$ gɔ̀ $g^yà$=**kɔ̨̀n**$_*$+kɔ̀j+kùt+hàj–$g^jà$
á=**kɔ́n**$_*$+k’ɔ̀mbáátkà gɔ̀ gà=**kɔ́n**$_*$+kɔ́j+kút+háj–gá
3EMPS=**let**+imitate:PFV and:SA 3EMPD:3PLS=**let**+Kiowa+write+inform–DETR.PFV
‘so they might be motivated to do likewise and learn Kiowa writing’
Lit. ‘and let them do the same and learn to write Kiowa.’ (McKenzie et al. 2022: S181)

[14] All the examples here have third person subjects, but first-person subjects are acceptable.

As this example also shows, /kɔ́n/ only takes scope over the event described by the verbal complex it is a part of. That is, it cannot take scope over the first clause. Elicitation shows it in such cases to be required on both conjuncts.

1.4.3 Capability: Ability and circumstantial possibility

Abilities describe root possibility modals that reflect the subject's capacity of carrying out the described action, like *Elena can dance well*. Such a phrase in English can be whether she is doing it at the time or not, or even if she has never actually done it. In Kiowa, expression of ability is a peculiar semantic gap– it is not directly expressed. There are no 'words' describing abilities in the same abstracted sense. There are a number of indirect or unspecified methods of indicating ability based on some proven skill or action. More common are means of expressing inabilities that are not simply the negation of abilities. Most of these are indirect as well.[15]

An apparently simple elicitation prompt like *Elena can dance well* does not return a simple result. One can say she dances well, with the habitual (53a), which entails that she can. One can say she knows how to dance (53b). If the ability is a general skill, the verb /mɔ́:gɔ́/ 'be skilled' is used (53c), and obviously entails ability. If the verb has a detransitive (non-agentive form), that form can be used to indicate a 'manage to' reading that entails an ability, especially with the habitual (54).

(53) Prompt: Elena can dance well.

a. Elena ą̀n t'á:gʲà–j ę̀m=gų́n–mɔ̨̀
Elena àn t'á:gà–j èm=gún–mɔ̀
Elena HAB good–ADV 3SGA:REFLO=dance–IPFV$_{VT}$
'Elena dances well.'

b. Elena ą́n=kų́n+hàj–gʲà+dɔ̀:
Elena án=kún$_*$+háj–gá+dɔ́:
Elena 3SGD:3PLS=dance$_C$+inform–DETR$_C$+be
'Elena knows how to dance.'

c. Elena ą́n=kų́n+mɔ̨́:gɔ̀
Elena án=kún$_*$+mɔ́:gɔ́
Elena 3SGD:3PLS=dance$_C$+be skilled
'Elena is a good dancer.'

(54) Prompt: 'Elena was able to clean the floor.'

Elena tò:+dǫ̂m ą̀n á=pʰí:lʲ–à
Elena tò:+dǫ̂m àn á=pʰíl–à
Elena house$_C$+bottom:VAGUE HAB 3SGD:3SGS=wipe.DETR–PFV$_{VI}$
'Elena managed to clean the floor/got the floor cleaned.'

In the case of English, ability modals can be true even if the event has never happened. In Kiowa though, the ability expressions only apply if the event has taken place at least once. In the case that it hasn't happened, you have to make a prediction, and use one of the above methods with the modal inflection.

The modal inflection is sometimes used for root possibility on its own. For instance, in one story, a man has locked another in a gas station restroom, forcing him to drink some alcohol before letting him out.

(55) hégɔ́ kɔ̂:l à=tʰǫ́:+tę̂: k'í:∼ gìg∼ ém=kʰî:–t'ɔ̀:
hégɔ́ kɔ̂:l à=tʰǫ́:+tę̂: k'í:gà hègɔ́ èm=kʰî:$_*$–**t'ɔ́:**
just as some\IRR 2SGA:3SGO=drink+take.PFV\IMP afterwards then 2SGS=leave.**PFV–MOD$_{VI}$**
'Just take it and drink. After that you can leave.' (McKenzie et al. 2022: S227)

[15] The term **dynamic** is sometimes used to describe this kind of modality, specifically ones that are determined on the subject's capacities, rather than some external set of propositions.

1.5 Root impossibility

Negative ability is expressed with a number of verbs indicating difficulty or inability, implied by negating the root possibility modals (39), or implied with a formulaic wh-question.

Circumstantial impossibility is expressed in a variety of ways as well. It is difficult to distinguish circumstantial impossibility from inability, since they both involve facts of the world. Abilities involve facts internal to the subject, while circumstantial modals focus on facts (though may sometimes include them).

1.5.1 Lack of ability

Lack of abilities are expressed by negating various means of expressing ability (see (§**??**), also (63b) in this section).

(56)

Negation involved with an inability modal can indicate ability in a roundabout way, though it is not preferred.

(57) hǫ́n bót yą́n=pį́ː+mǫ́ɔ́ː–gɔ̂ː
hɔ́n bót yán=pį́ː+mɔ́ɔ́ː–gɔ̂ː
NEG bót 2SGD:3PLS=cook+be unable–NEG
'You can cook bot.' (Lit. You are not unable to cook bot)

(58) hǫ́n hǫ́ndé gʲà=mɔ̀ǫ́ː+dǫ̀ː:mǫ̀ː
hɔ́n hɔ́n–dé gà=mɔ̀ɔ́ː$_*$+dǫ́ː:mǫ̀ː
NEG thing\INDEF–BAS 3EMPD:3PLS=be unable+be.NEG
'There is nothing to great for you to do.' (Harrington 1928: 115)

Harrington (1928) also seems to encounter this indirectness. He lists *'ɑ-'ɑ̄'-dɑ* as 'be unable' (p. 17), but his examples are actually mis-glossed cases of /mɔ̀ɔ́ː/. Harrington also lists *pɑ̄'-tɥ̄'mɑ́* as 'not to be able' (p. 131). This is actually the negative form of /pɔ̀ː tʰą́ː/ 'come to feel to be easy'. That is, the subject is not finding it easy.

1.5.2 Circumstantial inability

In other cases, 'inability' tends to be circumstantial in nature. That is, the subject has a capacity to perform the event, but is somehow prevented by outside forces. Kiowa has a number of ways to describe this kind of inability.

1.5.2.1 /ɔ́ː/ 'become unable'

The verb /ɔ́ː/ 'become unable' welcomes incorporating verbs, linked by the particle /pá/, especially if the inability is linked to the circumstances. In (59), the speaker was stunned by another person's blunt words, and found themselves unable circumstantially to reply.

(59) tsɔ̂ː ∅=tɔ́ n∼ ég∼ ígɔ́ jɑ́=hájâj+tǫ̀ː+**pà**+ɔ̀ː
tsɔ̂ː ∅=tɔ́ nɔ̀ hégɔ́ hègɔ́ jɑ́=hájâj$_*$+tǫ́ː+**pá**+ɔ́ː
thusly 3SGS=say.PFV and.DF meanwhile then 1SGD:3PLS=anyhow+say+**PART**+**become unable.PFV**
k'í:gʲà
k'í:gà
afterward
'That's what she said, and afterwards I just couldn't say anything after that.' (McKenzie et al. 2022: S180)

1.5.2.2 /hé̱ː/ 'lacking'

Sometimes a circumstantial inability can be expressed by incorporating the verb stem onto the welcoming form /hé̱ː/ 'lacking', making a descriptive predicate.

(60) kʰɔ̂ː âj+hjè̱ː ∅=dɔ́ː
kʰɔ̂ː âj$_*$+hé̱ː ∅=dɔ́ː
car start+lacking 3SGS=be
'The car won't start.'

1.5.2.3 /mɔ́ɔ́ː/ 'be unable (from circumstance)'

In texts and elicitation, the expression of 'cannot' with a circumstantial context usually employs the verb /mɔ̀ɔ́ː/ 'be unable (due to circumstance)', which is limited to circumstantial modal contexts. It is far more commonly used in its imperfective form /mɔ́ɔ́ːdèp/.[16]

(61) tsę̂ː dôj+tǫ́n=k'ɔ̀t ą́n=kô̜l+**mɔ̨̀ɔ́ːd–èp**
tsę̂ː dôj$_*$+tón=k'ɔ̀t án=kô̜l$_*$+**mɔ̀ɔ́ːd–èp**
horse too much+fat=as.UNEXP.SA 3SGD:3PLS=turn around+**be unable$_{\text{IPFV}}$–IPFV$_{\text{VI}}$**
'The horse is too fat and it can't turn around' (P. McKenzie Collection Box 21 Folder 4 Pg 21)

1.5.3 Eliciting different flavors of inability

Elicitation with contexts that do not involve circumstance require the use of other verbs than /mɔ̀ɔ́ː/. For instance, if we are talking about making *bót*, a Kiowa delicacy, the verb indicates the reason for the inability. Comparing with the use of /mɔ̀ɔ́ː/ when circumstance prevents one from being able (62), we can see other verbs to describe not knowing how (63), or it not being proper (64), or having tried but failed (**??**). One can also indicate being told not to do it with the verb /îl/, 'warn, dissuade, forbid' ((**??**), §**??**). As with /mɔ̀ɔ́ː/, what is impossible or difficult is the grammatical subject, and the person it is impossible for is dative-marked.

Context:
I know how to cook bót, but I don't have the ingredients.

(62) bót yą́=pį́ː+mɔ̨̀ɔ́ːd–èp
bót yą́=pį́ː+mɔ̀ɔ́ːd–èp
bót 1SGD:3PLS=cook+be unable$_{\text{IPFV}}$–IPFV$_{\text{VI}}$
'I can't make bót.'

Context:
I was asked to make bót, but I never learned how.

(63) a. #bót yą́=pį́ː+mɔ̨̀ɔ́ːd–èp
b. hǫ́n bót yą́=pį́+háy–g–ɔ̂ː
hɔ́n bót yą́=pį́+háy–g–ɔ̂ː
NEG bót 1SGD:3PLS=cook+inform–DETR–NEG
'I can't make bót.' (lit. 'I didn't learn how to make bót')

Context:
I was asked to make bót, but it isn't the Kiowa way for me to do it.

(64) a. #bót yą́=pį́ː+mɔ̨̀ɔ́ːd–èp
b. hǫ́n bót yą́=pį́+k$^{\text{h}}$ô̜l+dɔ̨̀ː–mɔ̨̀ː
hɔ́n bót yą́=pį́+k$^{\text{h}}$ô̜l$_*$+dɔ́ː–mɔ̂ː
NEG bót 1SGD:3PLS=cook+allow+be–NEG
'I can't make bót.'

Context:
I wanted to make bót, but I was told not to.

(65) a. #bót yą́=pį́ː+mɔ̨̀ɔ́ːd–èp
b. bót yą́=pį́+îl+dɔ̀ː
bót yą́=pį́+îl$_*$+dɔ́ː
bót 1SGD:3PLS=cook+forbid+be
'I can't make bót.'

[16] This verb seems to be derived from /mɔ́ː/ 'somewhat' + /ɔ́ː/ 'become unable'. The nasality does not carry over to the second vowel as it usually does, which suggests an incorproration boundary; those block nasal spreading. Also, the short vowel on /mɔ́/ suggests a solid lexicalization. Speakers now consider this word monomorphemic.

1.6 Root necessity

1.6.1 Priority necessity

Prioirity necessites combine different kinds of modal flavors that involve priorities that can affect the described actions. For instance, deontic modals

It is difficult in elicitation to distinguish bouletic modals from deontic ones. If you're telling someone what to do, the line can get blurry. Teleological modals are easier because you merely need to add the goal explicitly.

Kiowa does not employ many dedicated expressions of direct deontic obligation, that indicates a necessity based on the laws or customs. Elicitation found none, and eliciting 'have to' rarely had fruitful results with direct translation. The only observed deontic expression is /mâ:sɔ̀t/ 'supposed.to', which is rare.

1.6.1.1 /mâ:sɔ̀t/ 'supposed to'

The free adverbial /mâ:sɔ̀t/ is an adverbial used for a modal base involving expectation due to various social factors, like a plan (**??**) or the law (67), which can both be characterized as moderate deontic necessity. In all the best worlds where the expectations are met, the event happens. This adverb is used without modal inflection.

(66) mą̂sɔ̀t ôj–dè+k^{h}ì: ę̀m=ą́:n–ę̂: gɔ̀ hǫ́n ę̀m=tsą́:n–ǫ̂:
mâsɔ̀t ôj$_{*}$–dé+k^{h}í: èm=án–ê: gɔ̀ hɔ́n èm=tsán–ɔ̂:
supposed to EXACT–ADV+day 2SGS=come.IPFV–HSY$_{IPFV}$ and.SA NEG 2SGS=arrive–NEG
'You were supposed to be here on a certain day, but you did not come.' (P. McKenzie Collection Box 21 Folder 5 Pg 103)

(67) **mą̂:sɔ̀t** ɔ́y–gú ę́:–hǫ̀–dè ą̀n g^{y}á=k'ì:kǫ̀:m–ę̀:
mâ:sɔ̀t ɔ́y–gú ę́:–hɔ̀$_{*}$–dé àn gá$_{*}$=k'í:kǫ̂:m–è:
supposed to be many–INV PROX–DEF–BAS HAB 3EMPA:3PLO=decide.IPFV–HSY$_{IPFV}$
'The majority is supposed to make these decisions' (McKenzie et al. 2022: S189)

The use of /mâ:sɔ̀t/ implicates that the event is not happening like it ought to, but that is not an entailment.

While /mâ:sɔ̀t/ is rare, much more common are several expressions and morphemes used to translate various deontic necessities, all of which have independent non-deontic meanings.

1.6.1.2 Imperative 'necessity' modals

Most often, the imperative is used for this kind of expression. In English, necessity modals are often used to indirectly give commands. In Kiowa it's the converse: commands are used to indirectly express necessity. Instead of saying "you have to do it," one simply says "do it." A good example of this switch comes from Parker McKenzie's notes, with his own translation (including specification of number).

(68) kɔ́j+tǫ̀:–g^{y}à ę́=tsá:l^{y}–î:–tɔ̀:=dè bàʔ=mɔ̀:k^{y}ą́+**gùl**
kɔ́j$_{*}$+tǫ́:–gá ę́=tsál–î:$_{*}$–tɔ́:=dé bàt=mɔ̀:ką́$_{*}$+**gûl**
Kiowa+speak–BAS 2SGA:1SGO=ask$_{IPFV}$–IPFV–MOD$_{VT}$=BAS 2SGA:3PLO=in preparation+**write.PFV\IMP**
'You, 2s, must write up beforehand Kiowa words that you will be asking me about.' (P. McKenzie Collection Box 21 Folder 1 Pg 81).

When used for deontic modality, the imperative usually comes with a particle: /dá/ if the modal resulting from the imperative is absolute, /dáàl/ if it is strong, or /hét/ if it is weak. In section (1.8), we discuss how these particles lead to different strengths; here we can see that imperative 'deontics' with /dá/ cannot be avoided, while those with /dáàl/ can. This is reflected in translations and judgments. As we see in (70), the imperfective imperative that is used for ongoing or generic commands can be used for regular or long-term obligations.

(69) k^{hy}ą́hį́:gɔ́: **dá** ę̀m=tsą́n
k^{h}áhį́:gɔ́: **dá** èm=tsán
tomorrow **ABS.NEC** 2SGS=arrive.PFV\IMP
'You have to come tomorrow.' (PM Archives, Box 21 Folder 1 Pg 17)

(70) ę́mdèòp **dáàl** ę̀m=tsą́:n–ę̂:
émdèòp **dáàl** èm=tsán–ê:
occasionally **STR.NEC** 2SGS=arrive–IPFV\IMP
'You ought to come from time to time.'

The story where the trickster Séndé tricks a White man, as told by Alma Ahote (McKenzie et al. 2022: 145 *et seq.*), shows the use of /hét/ to give various senses and uses of weak necessity. First, the White man finds out he's talking to Séndé, and asks him to do a trick. He is adding to Séndé's To-Do List, but only if the latter agrees.

(71) ą̀n bè=ts'ą̀:n+hó:l–ê: ... **hét** ę́=k^{h}ó+ts'ą̀:n+hó:
àn bè=ts'àn+hól–ê: ... **hét** ę́=k^{h}ó$_{*}$+ts'àn+hó:
HAB 2SGA:3INVO=deceive+kill.IPFV–HSY$_{IPFV}$ ... **WK.NEC** 2SGA:1SGO=right now+deceive+kill.PFV\IMP
'You trick people ...so how about you trick me?'

Séndé demurs, saying his medicine is far away, so the White man strengthens his request to a command:

(72) t'ɔ́k^{h}ɔ́y+k'í: ∅=tǫ́n–ę̂: hǫ́:nę̂, ę́=k^{h}ó+ts'ą̀:n+hò:
t'ɔ́k^{h}ɔ́y+k'í: ∅=tǫ́n–ê: hǫ́:nê, ę́=k^{h}ó$_{*}$+ts'àn+hó:
White+male 3SGS=say.IPFV–HSY$_{IPFV}$ no 2SGA:1SGO=right now+trick+kill.PFV\IMP
'the Whiteman said, "No, trick me now."

Séndé still balks, so the White man makes an offer, which will only go through if the addressee accepts.

(73) **hét** tsę̂: gʸá=ɔ́:+ǫ̀:–tɔ̀:
hét tsę̂: gʸá=ɔ́:$_{*}$+ǫ́:–tɔ́:
WK.NEC horse 1SGA:2SGD:3SGO=awhile+give.PFV–MOD$_{VT}$
'Let me just go ahead and lend you my horse'

Séndé takes the horse and pretends he can't get it to walk because the horse knows he isn't its owner. He gently prods the White man for some help to convince it:

(74) hét k'ǫ̀nbǫ́hǫ̀:–dɔ̀ nǫ́=ɔ́:+ǫ̀:
hét k'ɔ̀nbóhǫ̀:–dɔ̀ nɔ́=ɔ́:$_{*}$+ǫ̂:
WK.NEC hat$_{INV}$–INV 2SGA:1SGD:3INVO=awhile+give.PFV\IMP
'Go on and lend me your hat'

The man agrees, but that still doesn't seem to work, so Séndé strengthens his next request:

(75) èm=ɔ́:gɨá+k^{h}ǫ̀n–mǫ̀ hóldà ją́=ɔ́:+ǫ̀:
èm=ɔ́:gá$_{*}$+k^{h}ǫ̂n–mɔ̀ hóldà ją́=ɔ́:$_{*}$+ǫ̂:
3SGS:REFLO=refuse to relinquish+balk–IPFV$_{VT}$ shirt 2SGA:1SGD:3PLO=awhile+give.PFV\IMP
'He's balking. Let me borrow your shirt.'

This kind of exchange continues until the White man watches Séndé ride off with all his possessions...but at least he got to see a trick!

1.6.1.3 Habitual 'deontics'

Imperatives are useful for adding obligations to the Common Ground, but how do Kiowa speakers describe an obligation that is already there? Usually people simply use a generic sentence, expressed with a habitual particle /àn/. This is notably the case for explaining cultural expectations, such as what Kiowas ought to do, in a manner similar to a parent telling a child, "We say 'please' in this house" as an implicit admonishment. Note that the singular noun in the prompt in (76) was returned as a plural, which is normal for habitual statements in Kiowa.

Prompt: A man has to take care of his family.

(76) k'ʲą́:hjòp tépkòp **ą̀n** ę́m=pɔ̀:+dó:
k'ą́:hjòp tépkòp **ą̀n** ém=pɔ̀:+dó:
man.INV relative.INV **HAB** 3EMPA:3EMPO=bring$_C$+hold
Lit. 'Men take care of their loved ones'

The use of negation in these forms is discussed in §1.7.2

1.6.1.4 Modal inflection for circumstantial necessity

Sometimes the modal inflection can be used to indicate a necessity borne of pressing circumstance. For instance, if it is time to leave.

(77) mį̂n gʸà=pɔ́ʔtɔ̀ gɔ̀ à=kʰó+bà:–**t'ɔ̀:**
mîn gà=pɔ́ttɔ̀ gɔ̀ à=kʰó$_*$+bá:–**t'ɔ́:**
about to 1SGA:3PLO=eat.IPFV and.SA 1SGS=right now+go.PFV–**MOD$_{VT}$**
'I'm about to eat and I have to go now.'

1.6.1.5 /ɔ́n$_*$+dɔ́:/ 'want, be in need'

The verb /ɔ́n$_*$+dɔ́:/ 'want, be in need' is a main verb that can be used to express needing something. When it is used that way it denotes a circumstantial modal, and when it is 'want' it denotes an attitude (§**??**). It is an intransitive verb, even if its English counterpart is transitive. When there is an overt object of need, that object is the intransitive subject, and the needer is an applicative argument (**??**).[17]

(78) bôt pį́:–gʲá gʲát=ɔ́tʰɔ̨́n gɔ̀ bà=ɔ̨́n+dɔ̀:
bôt pį́:–gʲá gát=ɔ́tʰɔ́n gɔ̀ bà=ɔ́n$_*$+dɔ́:
because eat$_C$–BAS 1NSGD:3PLS=run.out.DETR.PFV and:SA 1INCL=need+be
'because we have run out of food and we need some.' (SIL story No. 14)

Elicitation also finds /ɔ́n+dɔ̀:/ meaning 'need' sometimes.[18] While /ɔ́n+dɔ̀:/ can be used for circumstantial necessity, it cannot be used for deontic necessity.

(79) kʰɔ̂: gʲá=ɔ̨́n+dɔ̀:.
kʰɔ̂: gá=ɔ́n$_*$+dɔ́:
car 2SGD:3SGS=need+be
'You need a car.'

a. Circumstantial Context: You're coming to my house but it's 20 miles away and no one can take you there. ✓
b. Deontic Context: The law says you need a car #

1.6.2 Caused obligation with –/hóp/

Kiowa has a verb suffix –/hóp/ 'tell to' that indicates a transferred obligation: It applies to sentences with third-person subjects, and tells the addressee to have that third person do the action. It adds to the Addressee's To-Do List the task of adding to the subject's To-Do list. As such, it can be translated into English with 'have to' or 'should', though it does not directly denote that modal priority. However it is closer to telling someone in English to *make sure* the person does it.

This suffix is added to the perfective stem of the verb and does not inflect or bear other inflection.

(80) ∅=kų́n+ą̀:–**hòp**
∅=kún$_*$+ą́:–**hóp**
3SGS=dance$_C$+come.PFV–tell to
'Tell him/her to come dance.' / 'He/she should come dance'

[17] It seems that /ɔ́n$_*$+dɔ́:/ is derived from the stative result form of /ɔ́n/ 'think', although modern speakers do not consider it as directly related.
[18] Parker McKenzie (ms.) also discusses the ambiguity in his papers.

(81) *∅=kɻ̨n+ą̀ː–mɔ̀ː–**hòp**
*∅=kún$_{*}$+ą́ː–mɔ̂–**hóp**
3SGS=dance$_{C}$+come–NEG–tell to

1.6.3 Bouletic necessity /jàl/

One common expression to express propositions subject to the speaker's desire is /jàl/ 'hopefully', which is a kind of optative particle that describes what happens in all the possible worlds where the speaker's relevant wishes come true.[19] It is generally sentence-initial, and always occurs with with no modal or aspectual inflection, though it can occur with negated clauses.

(82) jàl jíːgʲàtʰɔ̀j mɻ́=kʾʲáːl–éː
jàl jíːgàtʰɔ̀j mé=kʾál–éː
hopefully each other 2DUA:REFLO=meet.PFV–PFV
'I hope you two meet each other.'

(83) jàl hɻ̨n ɻ́=ɔ̂j+kʰɻ̀n+ɔ̀m–gɔ̀ː
jàl hɔ́n ɻ́=ɔ̂j$_{*}$+kʰín+ɔ́m–gɔ̂ː
hopefully NEG 1SGD:3SGS=again+cough+make$_{DETR}$– DETR.NEG
'I hope I don't catch another cold.' (P. McKenzie Collection Box 21 Folder 02 Pg 06)

One common use of /jàl/ is in well-wishes.

(84) jàl hɻ̂kɔ̀ jɻ́n=ɻ́ː!
jàl hɻ̂kɔ̀ ján=ɻ́ː
hopefully Christmas 2SGD:3PLS=be pleasant
'Merry Christmas!' (lit. 'hope your Christmas is great!')

Using /yàl/ in a yes/no question asks about the addressee's hopes.

(85) hɔ̀ jàl há–bé hóldé ɻ̀m=ɔ̂j+bɻ̀ː
hɔ̀ jàl há–bé hóldé èm=ɔ̂j$_{*}$+bɻ́ː
yes/no.Q hopefully some–along soon 1SGA:2SGO=again+see.PFV
'Do you hope I'll see you again soon?'

Semantically, /jàl/ is always indexical and future-oriented from the utterance time. To talk about hopes at other times, or to allow for non speech act participants to be the hoper, the predicate /óbàtɔ̀ː/ 'hope' is used (Chapter XX: Attitudes and intensions).

1.6.4 Prediction: Future 'tense' or WOLL

Standard predictions generally involve the modal inflection, and is most often translated into English with 'will', as it is used for most future contexts.

(86) dɔ́ː+kʰìː à=ɔ̂j+pɻ̀ː+tsą̀n–**tʾɔ̀**ː
dɔ́ː$_{*}$+kʰíː à=ɔ̂j$_{*}$+pɻ́ː+tsán–**tʾɔ́**ː
holy+day 1SGS=again+see$_{C}$+arrive.PFV–MOD$_{VT}$
'I will/should/might come see you again on Sunday.'

However, like English *will*, the modal inflection is not a tense marker, but instead indicates root necessity: In all the relevant possible outcomes given how things are going, the proposition will become true. This modal form is sometimes given the abstract name WOLL, after the German modal form.

The modal inflection varies in force, so the translations range from 'will' to 'should' to 'might'. As we saw in §1.2.1, this weakening effect can be attained by shrinking the domain the universal quantifier applies to. Adverbials like /hájáttɔ̀/ (§1.2.3.1) also strengthen or weaken the modal.

[19] Parker McKenzie lists /tsàl/ as an alternative form, though it may be an archaic word, for we have neither attested it nor been able to elicit it.

(87) hájáʔtò dɔ́ː+kʰìː à=ɔ̂j+pǫ̀ː+tsą̀n–**t'ɔ̀ː**
hájáttò dɔ́ː$_*$+kʰíː à=ɔ̂j$_*$+pǫ́ː+tsán–**t'ɔ́ː**
maybe holy+day 1SGS=again+see$_C$+arrive.PFV–MOD$_{VT}$
'I might come see you again on Sunday.'

Domain sizing particles (§1.8) can be used to fix the prediction as stronger, and narrowers can fix it as weaker.

(88) ę̀m=tsą́n–t'ɔ̀ː=nǫ̀ **dáàl** ę̀m=tʰáj+hìː–tɔ̀ː
èm=tsán$_*$–t'ɔ́ː=nɔ̀ **dáàl** èm=tʰáj$_*$+híː–tɔ́ː
2SGS=arrive.PFV–MOD$_{VT}$=if.DF **WK.NEC** 1SGA:2SGO=accompany+take.PFV–MOD$_{VT}$
'If you come then I WILL come go with you' (P. McKenzie Collection Box 21 Folder 4 Pg 21)

1.6.5 Futurate imperfective

In many languages, and in Kiowa, imperfectives can be used for future events that have yet to start, like *The Yankees are playing tomorrow.* Copley (2008) points out that this 'futurate' use is licensed by the certitude that the event will happen, for instance if it is planned. In all the realistic possible worlds where the plan plays out, this event will happen. This sense of playing out fits with modal senses of the imperfective like Portner (1998), Deo (2009), which describe events that will eventually become complete if nothing intervenes (ch. on aspect).

(89) dɔ́ː+kʰìː à=ɔ̂j+pǫ̀ː+tsą̀n–mà
dɔ́ː$_*$+kʰíː à=ɔ̂j$_*$+pǫ́ː+tsán–mà
holy+day 1SGS=again+see$_C$+arrive$_{IPFV}$–IPFV$_{VI}$
'I'm coming to see you again on Sunday.'

If the event's beginning or culmination is imminent, /mîn/ 'about to' is used.

(90) dɔ́ː+∅–gɔ̀ mı̨̂n á=dɔ́ː+tɔ̀ː
dɔ́ː$_*$+∅–gɔ́ mîn á=dɔ́ː$_*$+tɔ́ː
sing+N+INV about to 3EMPS=sing+act(IPFV)
'The singers are about start singing.'

If an event is not planned or expected to come about, the imperfective is not allowed.

Context:
Melody has come by to visit you sometimes on Sundays, and she might this weekend, but you have yet to make any plans.

(91) #Melody dɔ́ː+kʰìː à=ɔ̂j+pǫ̀ː+tsą̀n–mà
Melody dɔ́ː$_*$+kʰíː à=ɔ̂j$_*$+pǫ́ː+tsán–mà
Melody holy+day 1SGS=again+see$_C$+arrive$_{IPFV}$–IPFV$_{VI}$
'Melody coming to see me again on Sunday.'

1.7 Root negative necessity

Expressing negative deontic necessities (essentially "must not") indicates that in no possible worlds, the proposition will come true. Or rather, that in all possible worlds it will not come true. In addition, expressions of prohibition do not involve the imperative in Kiowa, and there are no dedicated modal expressions to it. Instead, it involves either the prohibitive form, a negated generic clause, or the verb /îl/ 'dissuade, forbid'.

1.7.1 Prohibitive form

The form that Watkins (1984) labels the 'prohibitive' is most often used for this meaning. This is a periphrastic construction, using the particle /pòj/ 'NEG.NEC' which transmits instructions that under no circumstances shall the event take place, along with the non-negated modal inflection. The prohibitive form is usually used for forms that indicate the illocutionary act of telling someone not to do something. That is, it puts "do not" on the addressee's To-Do List (§**??**). For instance, in (**??**), the speaker is exhorting listeners not to be stingy with Christmas presents.

(92) hégɔ́ **pòj** kɔ́ɲ̀n+hòldà bát=ɲ̀ː–tɔ̀ː
hégɔ́ **pòj** kɔ́ɲ̀n$_*$+hóldà bát$_*$=ɲ́ː–tɔ́ː
just as **PROH** pitiable+clothes 2PLA:3PLD:3PLO=give.PFV–MOD$_{VT}$
'Don't give people dumpy clothing.' (Hokeah 1946)

The speaker can be included in the list.

(93) **pòj** ɛ́ː–hɔ̀ː hájá bà=tɛ́ː–t'ɔ́ː
pòj ɛ́ː–hɔ̀ː hájá bà=tɛ́ː–t'ɔ́ː
NEG.NEC PROX–DEF in any way 1INCLS=talk.PFV–MOD$_{VI}$
'Let's not say anything.' (McKenzie et al. 2022: S112)

This form can also be used for caused prohibition. In (**??**), the speaker is telling the addressee not to let a baby cry, which would hinder their escape.

(94) **pòj** ɛ̀m=ɔ̀t+há:dè–tɔ̀ː
pòj èm=ɔ̀t+há:dè$_*$–tɔ́ː
NEG.NEC 3SGA:REFLO=cry+shout.PFV–MOD$_{VT}$
'Don't let him cry out.' (McKenzie et al. 2022: S55)

1.7.2 Negated habitual 'deontics'

Generic prohibition can be expressed by using the prohibitive form with the modal-marked imperfective, or by using a negated habitual form, the converse of the use in §1.6.1.3 The syntax requires the negation particle /hɔ́n/ to appear to the left of the habitual particle /àn/. This is generally seen as indicating that /hɔ́n/ is higher than /àn/ in the syntax. However, semantically there is variability in scope. Sometimes it is negation > habitual, which gives a sense of 'never', while other times it is habitual > negation, which gives a sense of 'usually don't'.

(95) gɪ́ː–gɔ́ː tsój hɔ̨́n ą̀n á=t^{h}ɔ̨ː–mɔ̨̀ː
gɪ́ː–gɔ́ː tsój hɔ́n àn á$_*$=t^{h}ɔ́ː–mɔ̂ː
night–during coffee NEG HAB 3EMPA:3SGO=drink–$_{NEG}$
'One mustn't/shouldn't drink coffee at night.' (Lit.'People do not drink coffee at night.')

(96) są̂ː–dɔ̀ hɔ̨́n t^{h}á:–dè bét=ɔ́ː–mɔ̨̂ː
są̂ː$_*$–dɔ́ hɔ́n t^{h}á:$_*$–dé bét=ɔ́ː–mɔ̂ː
child$_{INV}$–INV NEG match–BAS 3EMPA:3INVD:3PLO=give–NEG
'Children should not be given matches.' (Lit. 'People do not give children matches.' P. McKenzie Collection Box 18 Folder 02 Page 30)

1.7.3 /îl/ 'forbid, dissuade'

The verb /îl/ is commonly used to describe forbidding. Strictly speaking, it denotes the set of speech acts of telling someone not to do something, either as a warning, an exclusion, or retroactively as an admonishment.

In its result stative form it can be used to describe a thing or activity that is forbidden. As such that thing or activity is the subject, and the person forbidden from it is expressed as a dative argument.

(97) ją́=dɔ́ː+îl+dɔ̀ː
ją́=dɔ́ː+îl$_*$+dɔ́ː
1SGD:3PLS=sing+forbid+be
'I am not allowed to sing.'

1.8 Domain sizing particles

In §1.2.1, we discussed how domain widening can strengthen a necessity modal, by applying the universal quantifier to a wider range of possible worlds. With root modals we can see the same effect, and Kiowa even has particles that specifically indicate a widened or a narrowed domain. These particles can be described indicating the strength of the necessity, from completely strong (thus a hard obligation) to incredibly weak (a mere suggestion or invitation), to a completely negative strength. None of these particles (**??**) can co-occur. They are often used with imperatives (98) but sometimes with modal inflection (99), with the exception of /pòj/, which can only be used with the inflection.

particle	force	gloss	to-do	circumstances
dá	absolute necessity	ABS.NEC	obligation, must	under all
dáàl[20]	strong necessity	STR.NEC	advice, should	under the best
hét	weak necessity	WK.NEC	suggestion, invitation	if you like
pòj	negative necessity	NEG.NEC	prohibition	under none

Table 1.2: Domain-sizing particles

(98) dá/dáàl/hét kíː bàʔ=kn̨
dá/dáàl/hét kíː bàt=kɔ̂n
ABS/STR/WK.NEC meat 2SGA:3PLO=bring.PFV\IMP

a. /dá/ : you have to bring meat
b. /dáàl/ : you should bring meat
c. /hét/ : why don't you bring meat

(99) tʼǫ́lɔ̀ː+tʰǫ̀ː gʸà=kn̨–tɔ̀ː nɔ̀ dá/dáàl/hét/pòj kíː
tʼǫ́lɔ̀ː$_*$+tʰǫ́ː gà=kɔ̂n$_*$–tɔ́ː nɔ̀ dá/dáàl/hét/pòj kíː
sweet+drink 1SGA:3SGO=bring.PFV–MOD$_{VT}$ and.DF ABS/STR/WK/NEG.NEC meat
bàʔ=kn̨–tɔ̀ː
bàt=kɔ̂n$_*$–tɔ́ː
2SGA:3PLO=bring.PFV–MOD$_{VT}$
'I will bring the soda, and...

a. /dá/ : you certainly *will* bring the meat
b. /dáàl/ : you *will* bring the meat
c. /hét/ : why don't you bring the meat
d. /pòj/ : you, don't bring the meat / you will *not* bring the meat

[20]The particle /dáàl/ seems to be derived from the combination of /dá/ and the clitic /àl/ 'also', but speakers do not think of it as such. Indeed, one can find contexts where /dá/ is combined with /àl/.

(1) kʰɔ̂ː dá=àl à=kɔ̂l
kʰɔ̂ː dá=àl à=kɔ̂l
car STR.NEC=also 2SGA:3SGO=turn.PFV\IMP
'You 2s must also turn the car around' (P. McKenzie Collection Box 21 Folder 1 Pg 17)

Notably, with modal inflection these are rejected in out of the blue contexts; they need some content to which they can refer, like the first conjunct in (**??**). However, they are fine to use out of the blue with imperatives, except for /pòj/, which cannot be used with imperatives.

These particles offer a mix of modal meaning and imperative meaning. The interaction of modals and imperatives has drawn significant interest, but Portner (2007) links imperatives to modals in a way that is instructive here. The ordering sources that specify priority modals (deontic, bouletic, teleological, etc) draw their information from what Portner calls the To-Do List, an analogue to the Common Ground (ch. XX) but which indicates various tasks requiring completion. Imperatives add new positive tasks to the To-Do List, and prohibitives add negative tasks. Prioirity modality then reflects what is on this list. Essentially, an imperative results in a necessity modal being in the Common Ground, which could be weak or strong. "Go to the store and buy milk" proposes to add that idea to the listener's To-Do list, which in turn is reflected by proposition with a necessity modal: We need milk.

Formally we can derive this effect for the Kiowa particles if they indicate adding to the To-Do list and also affect the domain of the necessity modal. The particle /dá/ widens the domain of the modal. Widening a necessity modal's domain strengthens it: in *all* the possible worlds. Meanwhile, /dáàl/ narrows the modal's domain just the best possible worlds. The use of /hét/ indicates is narrowed to the point that it only includes the worlds where the addressee agrees to do it. Meanwhile /pòj/ narrows it to zero worlds. We can now propose why it is unavailable with the imperative. The imperative in Kiowa marks a positive proposition on the To-Do List, which is incompatible with a priority of never doing it. We can get a close sense of this distinction with the 'under x circumstances' locution in English.

(100) Modal priority strength associated with To-Do proposition

a. /dá/ You must/should under all circumstances

b. /dáàl/ You must/should under all the best circumstances

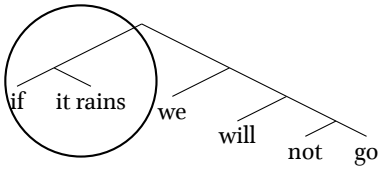
c. /hét/ You must/should under a small number of desired circumstances

d. /pòj/ You must/should under no circumstances

1.9 Conditionals

Conditional clauses are another important realm of modality. Conditional clauses modify the modal base, telling us information about which worlds are at issue. In (101), the if-clause indicates that among the circumstances that *will* is treating, we are only considering worlds where it rains.

(101) a. *If it rains, we will not go.*
in all the relevant worlds where it rains, we will not go



In essence, the truth of the main clause is conditioned on the embedded clause being true. In (101), the truth of whether you go or not depends on whether or not it rains.

Kiowa conditional clauses are not formed with a dedicated conjunction such as *if*. Instead, the condition clause is marked with the modal suffix and connected with the clause with the enclitic switch-reference connective *=gɔ̀/nɔ̀* (section (ref)). We will gloss it as 'if' here, since that is what it corresponds to in English, but it is also used for 'as, when, and', and other connective meanings.

(102) ∅=sép+dɔ:–t'ɔ:=nɧ̨ hɧ́n bà=bɧ́:–mɧ̂:–t'ɔ:
∅=sép$_*$+dɔ́:–t'ɔ́:=nɔ̀ hɔ́n bà=bá:–mɔ̂:$_*$–t'ɔ́:
3SGS=rain+be–MOD$_{VI}$=if.DF NEG 1INCLS=go–NEG–MOD$_{VI}$
'If it rains, we won't go.'

The conditional clause usually comes before the main clause, but it can come after it, or embedded within it.

(103) a. hǫ́n bà=bą́ː–mǫ̂ː–tʼɔ̀ː ∅=sép+dɔ̀ː–tʼɔ̀ː=nɔ̨̀
hɔ́n bà=báː–mô:$_*$–tʼɔ́ː ∅=sép$_*$+dɔ́ː–tʼɔ́ː=nɔ̀
NEG 1INCLS=go–NEG–MOD$_{VI}$ 3SGS=rain+be–MOD$_{VI}$=if.DF
'We won't go if it rains.'

b. hǫ́n ∅=sép+dɔ̀ː–tʼɔ̀ː=nɔ̨̀ bà=bą́ː–mǫ̂ː–tʼɔ̀ː
hɔ́n ∅=sép$_*$+dɔ́ː–tʼɔ́ː=nɔ̀ bà=báː–mô:$_*$–tʼɔ́ː
NEG 3SGS=rain+be–MOD$_{VI}$=if.DF 1INCLS=go–NEG–MOD$_{VI}$
'We won't, if it rains, go.'

1.9.1 Circumstantial conditions

With a circumstantial conditional, an asserting main clause always has a modal marker.

(104) báːò à=kǫ̂n–tɔ̨̀ː=nɔ̨̀ są̂n ∅=pɔ̀ːdôː–tɔ̀ː
báːò à=kôn$_*$–tɔ́ː=nɔ̀ sân ∅=pɔ̀ːdôː$_*$–tɔ́ː
cat 2SGA:3SGO=bring$_{PFV}$–MOD$_{VT}$=if.DF child 3SGA:3SGO=care for$_{PFV}$–MOD$_{VT}$
'If the child brings home a cat, she'll take care of it.'

1.9.2 Epistemic Conditions

Conditional clauses can modify an epistemic modal as well. However, as epistemic modals generally do not take modal inflection in Kiowa, the main clause does not bear it. The adverbial /mɔ́n/, which marks epistemic conclusion, is often present.

(105) Prompt: If Tom has the knife, then he killed Sam.

Tom kʼɔ̀ː ∅=dóː–tɔ̀ː=gɔ̀, mǫ́n Sam ∅=hól
Tom kɔ̂ː ∅=dóː$_*$–tɔ́ː=gɔ̀, mɔ́n Sam ∅=hól
tom knife 3SGS:3SGS=hold–MOD$_{VT}$=if.SA INFER Sam 3SGS:3SGS=kill.PFV
'If Tom has the knife, he must have killed Sam.'

(106) If Tom didn't kill Sam, then Harry must have.

Tom hǫ́n Sam ∅=hóːdɔ̂ː nɔ̨̀ ɔ́–j–hjɔ̀=dò Harry **mǫ́n** ∅=hól
Tom hɔ́n Sam ∅=hódɔ̂ː nɔ̨̀ ɔ́–j–hɔ̀ː=dò Harry **mɔ́n** ∅=hól
Tom NEG Sam 3SGS:3SGS=kill.NEG and.DF DISC–VAGUE–DEF=because of Harry INFER 3SGS:3SGS=kill.PFV
'Tom didn't kill Sam, and thus Harry must have.'

1.9.3 Counterfactuals

Counterfactuals are conditional clauses where the condition being expressed is known to be false. They are linguistically interesting because in many languages they trigger curious inflection, such as the past tense in English (107).

(107) If you had/(*have) been there, I would have seen you.

Kiowa counterfactuals do not trigger any special inflection. They resemble ordinary conditionals morphologically, in that both the if-clause and the main clause are marked with modal inflection. However, the if-clause begins with the particle /ʠgɔ̀l/ 'CNTRFCT', which has no other meaning than to signal counterfactuals.[21]

[21]There are two adverbials that look like they are built from this stem, although their current meanings would not appear composed from counterfactual meaning: /ʠgɔ̀làl/ appears to be built out of /ʠgɔ̀l=àl/ CNTRFCT=also but means 'in turn'. The word /ʠgɔ̀lt^{h}ɔ̀p/ appears to be built out of /ʠgɔ̀l+t^{h}ɔ́–p/ CNTRFCT+beyond–onward/ but means 'in reply'. Speakers do not break either of these down.

(108) mɔ̨́ɔ́jdêl ɧgɔ̀l tʰǫ̨gɔ̀ː tsɔ̂ː éʔté báʔ=kɔ́j+gùːɬ̪–ìː–tɔ̀ː=gɔ̀ hègɔ́ téː
mɔ̀ɔ́jdêl ɧgɔ̀l tʰǫ̨gɔ̀ː tsɔ̂ː étté bát=kɔ́j$_*$+gúl–îː–tɔ́ː=gɔ̀ hègɔ́ téː
unfortunately CNTRFCT long ago thusly a lot 1INCLA:3PLO=Kiowa+write–IPFV–MOD$_{VT}$=if.SA then all
ôj–hjɔ̀ː gɨáʔ=kòːdó+kɔ̀j+kùt+hàj–gɨà+dɔ̀ː–tʼɔ̀ː
ôj–hɔ̀ː gát=kòːdó$_*$+kɔ́j+kút+háj–gá+dɔ́ː–tʼɔ́ː
EXACT–DEF 1NSGD:3PLS=much+Kiowa+write+inform–DETR$_C$+be–MOD$_{VI}$
'Alas, if many of us had been writing Kiowa a long time ago, all of us would know how to write Kiowa well today.' (Letter to L Toyebo, 11/29/61. P. McKenzie Collection Box 20 Folder 1 Pg 60)

1.9.4 Relevance conditionals

Sometimes, the conditional clause does not modify the truth of the statement, but describes what might make it relevant to the speech situation. For instance, in (**??**), whether or not you come over does not affect whether or not I have any bót; I do anyways. It is as if there is a hidden "you should know" in the sentence. In a relevance conditional, what the conditional modifies are the worlds where the main clause is relevant. These worlds are not generally expressed by an overt modal.

(109) *If you come over, I made some bót.* ≃ In some of the worlds where it is relevant that I made some bót, you come over and I made some bót.

Relevance conditionals are often called 'biscuit' conditionals after an example where the speaker had biscuits. I have not observed any in texts, but they are more common in conversations than narratives. Then again, offering food is the norm in Kiowa culture, so there is little sense in using a conditional. Attempts at elicitation found that instead of conditionals, suggestions were made. A surefire way to elicit relevance conditionals is a translation task where the condition is about the future but the main clause describes a past event; that way the main event cannot have depended on the condition.

(110) Context: You are inviting a friend over, and are using the promise of bót to entice them. You tell them, "If you come by, I made some bót."
èm=tsán, bót gɨàt=ɔ́ːm–ɛ́ː=dò
èm=tsán bót gàt=ɔ́m–éː=dò
2SGS=arrive.PFV\IMPER bót 1SGA:3PLO=make–PFV=because
'(You should) come by, because I made some bót.'

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