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EVIDENTIALITY IN URAMA

Kimberley Nicole Craig

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requirements for the degree of
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Abstract

This thesis presents a description of evidentiality in the Urama language, which is a dialect of Northeast Kiwai, spoken on Urama Island in the Gulf Province of Papua New Guinea. The data in this study has come from both narratives and elicitation sessions with a native speaker of the language.

The aim of this thesis is to provide a detailed description of the evidential system of Urama, paying particular attention to the evidential morpheme *=ka*. *=ka* encodes speaker-oriented evidence for an utterance. In order to provide a detailed analysis of *=ka*, a number of different semantic tests are undertaken to determine its status as an evidential. These tests were designed to investigate the status of different evidential particles in languages; they are used to determine whether the evidential in question is functioning at the propositional, or illocutionary level of meaning. In turn, the level of meaning on which *=ka* operates determines whether it should be treated as an epistemic modal evidential, or a non-modal evidential.

The results of the tests suggest that *=ka* is operating at the illocutionary level of meaning, as a non-modal evidential. However, the most important finding of this study is the fact that *=ka* appears to contain two different meanings, operating at both the propositional *and* illocutionary levels. When *=ka* fails to appear where expected, it expresses inferential or secondary evidence on behalf of the addressee, for the speaker's utterance. This lack of *=ka* (i.e. $=\emptyset$) indicates a type of common ground between the speaker and the addressee. In comparison to *=ka*, $=\emptyset$ appears to function at a propositional level, and therefore operates as an epistemic modal. This conclusion is an important contribution to the field of evidentiality as there has been little documentation of languages which employ an evidential that expresses addressee-oriented evidence.

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Table of Contents

ABSTRACT	i
ACKNOWLEDGEMENTS	ii
LIST OF FIGURES	v
LIST OF TABLES	vi
GLOSSARY	vii
1. INTRODUCTION	1
1.1 The Gulf Province and Urama Island	2
1.2 Urama and the languages of Papua New Guinea	4
1.2.1 Languages of home and education	4
1.3 Previous work on Urama	5
1.4 Basic features of the Urama language	6
1.5 The present study	6
1.5.1 Goals of the investigation	6
1.5.2 Source of data and methodology	8
1.5.3 Structure of the thesis	8
2. MODALITY AND EVIDENTIALITY	9
2.1 What is evidentiality?	9
2.2 What is modality?	12
2.3 What is epistemic modality?	15
2.4 Studies in modality and evidentiality	16
2.5 The relationship between evidentiality and epistemic modality	19
2.6 The theoretical tools – the tests	22
2.6.1 Determining levels of meaning	23
2.6.2 Static Semantics: evidentials as epistemic modals	23
2.6.3 Dynamic Semantics: evidentials as illocutionary operators	24
3. =KA AND =RA	25
3.1 =ka	26
3.1.1 =ka and its morphosyntactic environments	26
3.1.2 Non-canonical word order effects on the placement of =ka	29
3.1.3 haka and hara	29
3.2 =ra	31
3.2.1 Different functions of =ra	31
3.3 =ka, =ra, and tense	34

3.3.1	= <i>ka</i> and tense.....	34
3.3.2	= <i>ra</i> and tense.....	37
3.4	Interactions between = <i>ka</i> and = <i>ra</i>	39
3.5	The evidential functions of = <i>ka</i>	40
3.6	Summary	42
4.	APPLYING DIAGNOSTICS TO = <i>KA</i>	43
4.1	Known Truth/Falsity test.....	45
4.2	Assent/Dissent test.....	49
4.3	Cancellability of Evidence Type Requirement test	57
4.4	Embeddability test.....	57
4.5	Summary	63
4.5.1	Addressee-oriented evidence.....	64
5.	CONCLUSION	67
	APPENDIX A – Paradigm of Urama verb inflections	69
	REFERENCES	72

List of Figures

Figure 1: Map of Papua New Guinea..... 1

Figure 2: Map of Gulf Province of Papua New Guinea.....2

Figure 3: Gulf Province Language Map.3

List of Tables

Table 1: Tense Paradigm	26
Table 2: Test Results	64
Table 3: Test Results: Propositional or Illocutionary	63

Glossary

Ø	lack of = <i>ka</i>	CERT	certitude
1DL	first person dual	COND	conditional
1P-	first person subject	DEF	definite
1PL	first person plural	DP	distant past
1SG	first person singular	-DL	dual subject
1TL	first person trial	EVID	evidential
2DL	second person dual	FUT	future
2PL	second person plural	HAB	habitual
2SG	second person singular	IMP	imperative
2TL	second person trial	INT	interrogative
2/3P-	second or third person subject	NEG	negative
3DL	third person dual	NP	near past
3PL	third person plural	PAST	past
3SG	third person singular	-PL	plural subject
3TL	third person trial	PO	plural object
AG	agent	PURP	purpose
ASSUM	assumption	TL	trial subject
BEN	benefactive	Y/N-	yes/no interrogative

1. Introduction

The Urama language is one of around 850 languages spoken in Papua New Guinea (Comrie, 2009). Urama, along with a number of other dialects, makes up the North-Eastern Kiwai language group which is a member of the Kiwai language family situated throughout the south-western coast of Papua New Guinea (Wurm, 1971). The Kiwai language family is a member of the Trans-New Guinea stock (Ross, 2005).

Figure 1: Map of Papua New Guinea



Figure 1. Map of Papua New Guinea showing the different provinces (Lewis, Simons, & Fennig, 2014).

Like any other language, Urama has ways of letting its speakers express the knowledge that they have about the world around them. The main objective in this study is to show how speakers of Urama communicate *evidence* of this knowledge through the use of their language. One of the ways in which speakers of Urama express this knowledge is through the use of modal and evidential particles. This study investigates modality and evidentiality in Urama, giving special attention to the clause-final particles *=ka* and *=ra*.

The morphemes *=ka* and *=ra* appear in complementary distribution with one another. *=ka* provides what appears to be evidential source – providing evidence for the information given in an utterance. It is the aim of this study to discover whether *=ka* is indeed an evidential marker, whether the particle

expresses epistemic modal values, or whether =*ka* contains both evidential *and* epistemic modal properties. As noted above, evidentials are used to express the information source from which the speaker has evidence for what they are uttering. Epistemic modals on the other hand, although they encode a similar type of meaning, are used to show the degree of certainty a speaker has for the proposition they utter, or their belief in what they are saying. Preliminary elicitation and observations of the clause-final (or more accurately – post-verbal) particle =*ka* has shown that the morpheme expresses some type of evidential meaning. Through the use of background research, and by carrying out a number of tests, this study aims to determine the status of =*ka*, and in turn provide a thorough analysis of the particle.

1.1 The Gulf Province and Urama Island

Urama is spoken by those who live on Urama Island in the Gulf Province of Papua New Guinea.

Figure 2: Map of Gulf Province of Papua New Guinea.

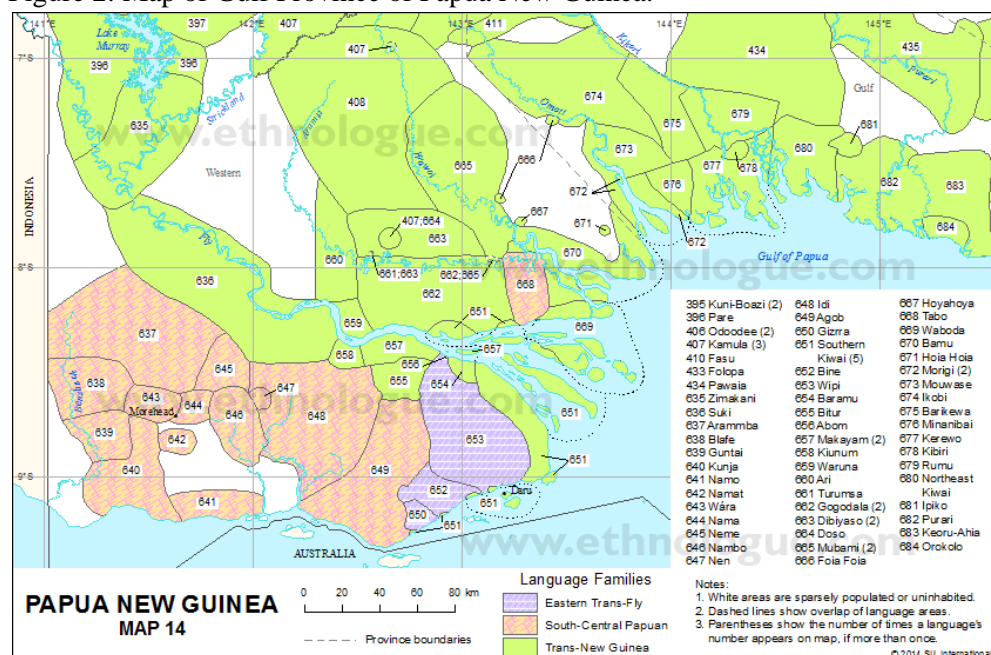


Figure 2: Map of the Gulf Province of Papua New Guinea, showing the language distribution (Lewis et al., 2014).

Urama Island is located in the waters of Deception Bay, on the border of the Coral Sea. Though quite large, it is made up of a number of smaller islands, which are separated by many rivers (such as the Era River). Access to neighbouring villages is via boat only - most of which are paddle boats, while some have small motors. The main industry in the area is logging, with logging companies employing many people. Kikori is the nearest main town and is a three hour boat ride away; it has an air strip

and shops, this is where many villagers working in professions such as teaching, travel to on a fortnightly basis in order to collect their wages.

There are around 10 villages situated throughout the island, all of which have Urama as their native language. The language consultant for this study comes from the village of Kivaumai, which is the largest and the original main village of Urama Island. It is located at the southern-most tip of the island, with a population of around 3000.¹ The surrounding Urama-speaking villages include Avamu/Morovamu, Gauri, Kinomere, Larimia, Mairivepea, Mirimailau, Oumaumere, Tovei, and Veraibari.

Figure 3: Gulf Province Language Map.



Figure 3: Map of the languages of the Gulf Province of Papua New Guinea (Lewis et al., 2014).

This map shows a close-up of the Gulf region where Urama Island is located. It can be seen that Northeast Kiwai (NE Kiwai) is located around the middle on the southern coast. The village of Kivaumai, from which the language consultant for this study is from, is a small island located at the southern tip of the large middle island in the NE Kiwai section.

¹This number has come from the language consultant for this study. The only other available data is from Wurm (1973) which states that there are 3700 speakers of North-Eastern Kiwai, of which 1700 are Urama speakers. Census data was unable to be found.

1.2 Urama and the languages of Papua New Guinea

As previously mentioned, Urama is one of around 850 total languages spoken throughout the mainland and islands of Papua New Guinea, and one of around 480 in the Trans-New Guinea Stock (Lewis, Simons, & Fennig, 2014). It is a Papuan language and is a dialect of North-Eastern Kiwai along with Arigibi (Anigibi), Gibaio, and Kope (Era River, Gope). Wurm (1971) describes Urama as being a dialect, along with Kope, which together constitute a separate language within the Kiwai family. Kope and Urama are very similar and speakers of Urama are mostly able to understand Kope. While many words are similar in both languages, such as *na'ura* in Kope and *na'uro* in Urama (both meaning 'what'), others have strayed slightly in meaning – *topi* 'stomach' in Kope, versus *dopi* 'pregnant' in Urama. It seems as though Urama and Kope are very similar and could therefore be dialects of the same language, as mentioned in Wurm (1971). More study and comparisons into both Urama and Kope would need to be conducted in order to draw a definite conclusion, as both languages are presently underdocumented.

The official languages of Papua New Guinea are Tok Pisin, Hiri Motu, and English, though English is only spoken by 1-2% of the population, and Hiri Motu by around 2% (The World Factbook, n.d.). Due to colonial rule, English is the language of both the government, and of education. Tok Pisin is the current *lingua franca* across much of the country. It is a creole language spoken by the majority of young people, and is a second language of most Papua New Guineans. Hiri Motu was the 'old' *lingua franca* before Tok Pisin became so widespread throughout Papua New Guinea. Spoken mainly by the older generation and by native speakers from traditional Motu-speaking areas, it is used less frequently as a *lingua franca* but has still played a major role in the country. The Austronesian language Motu (before the Motu-based pidgin *Hiri Motu* came about) was originally a language of Port Moresby and the Central Province. The language spread throughout the southern half of Papua New Guinea through trade and missionaries. Also known as *Police Motu*, Hiri Motu developed within the police force of Papua New Guinea. They began using a simplified version of Motu (which was used for trade) in 1888, which then became known as *Police Motu* and eventually became widespread outside the police force. In 1970, the name was officially changed to *Hiri motu*. Although once a common language, Hiri Motu is not being passed down to the next generation as a *lingua franca*, instead Tok Pisin has taken its place (Dutton, 1994).

1.2.1 Languages of home and education

Although Tok Pisin, Hiri Motu, and English are the national languages of Papua New Guinea, Urama is the most commonly spoken language in the homes and villages of Urama Island. Tok Pisin may also be heard, though it is essentially used for trade and socialisation, or as a *lingua franca* when

talking to people who come from other parts of Papua New Guinea. Hiri Motu is still spoken by much of the older generation and is used in church as the Bible has been translated into Hiri Motu. English is becoming widely known through schooling, though is not often used outside of the school environment. Children are taught lessons in Urama or Tok Pisin for the first two years of education, and then begin learning in English from grade 3 onwards, through secondary school, and into higher education if they continue to study. Although English is seen as the language of education, there is still a desire to use only Urama in the home and during everyday village life. While children are scolded at school for using their first language (such as Urama) in the classroom, when they are at home the opposite occurs with parents telling their children that English is only for use at school.

1.3 Previous work on Urama

Very little previous work has been completed on Urama. A Master's Thesis by Brown (2009) covers a range of basic grammatical features in the language. Despite being helpful early on in elicitation, a number of problems exist with the textual data from which the thesis was based. This resulted in a number of errors in the findings of different aspects of the grammar. A number of Brown's findings are discussed throughout this study, and differences in analyses of particular morphemes are outlined. Brown attempted to tackle the same particles, and her outcomes are explained alongside my findings. Brown (2009) provides a brief discussion of potential candidates for modals in Urama. The two morphemes that she includes in this discussion are the particles *ma* and *ka*. Brown treats *ma* as a deontic modal expressing obligation, while *ka* is claimed to be a declarative clause marker. Although the present findings on the modal morpheme *ma* seem consistent with Brown's conclusions, this thesis illustrates that *=ka*, although declarative-like in character, appears to express a more evidential type of meaning. It appears *=ka* indicates evidence of information for the speaker or agent, while the non-appearance of *=ka* where it would normally appear indicates evidence held on behalf of the addressee for the proposition uttered by the speaker.

Aside from Brown (2009), only a few studies relating to the language have been conducted. Wurm (1971) provides a brief background to Urama, while Wurm (1973) conducts a comparative lexical study of all Kiwai languages. Both Clifton (1990, 1995) are works on different aspects of the Kope language. Although not based on Urama, Ray (1933) is a primary text on Island Kiwai which includes both a comprehensive grammar, as well as a dictionary. This is a solid reference point for studying Kiwaian languages as many of these languages lack any documentation altogether.

1.4 Basic features of the Urama language

Urama has features which are fairly typical of Papuan languages (Foley, 1986; 2000). Like the majority of Papuan languages, Urama has a basic SOV word order, though many non-canonical word orders are possible. (1) and (2) provide examples of basic Urama sentences:

- (1) Mo uho n-ohiai=*ka*.
1SG fish 1P-catch=EVID
'I (just) caught a fish.'

- (2) Mo vare=*ka*
1SG laugh=EVID
'I laugh.'

Being head-final, Urama also makes use of postpositions rather than prepositions, and nouns follow their modifiers. It has a rich verbal morphology making use of affixes, auxiliaries and particles in order to express tense, number and person.

1.5 The present study

1.5.1 Goals of the investigation

Due to the very limited amount of documentation on Urama, this study is essential in helping to provide further information on the language, aiming to discover the ways in which modality and evidentiality are expressed. This study intends to decipher how the evidential system in Urama works, with a particular emphasis on discovering the meaning and functions of the clause-final morphemes =*ka* and =*ra*. In order to accomplish this, a range of semantic tests need to be conducted which should help to determine whether or not =*ka* actually functions as an evidential marker in the language. These tests are discussed in depth further in the thesis (see Chapter 4).

There are a number of reasons as to why the study of evidentials in Urama is interesting. The main reason is the behaviour of the clause-final particle =*ka*. This particle is interesting because it functions as an evidential type of marker which appears to show a *lack* of evidence for what is being said by the speaker on the part of the addressee. It appears on almost all present tense clauses, except in conditionals, interrogatives and imperatives, in which case the allomorph =*ra* is used. However, there are a number of inexplicable occurrences where neither =*ra* nor =*ka* appear where =*ka* was expected. Upon further analysis, elicitation, and context building, the lack of =*ka* was discovered to be a zero morpheme² (=∅) which expresses evidence on the part of the addressee for the statement

² The term 'zero' morpheme will not be used to describe the 'lack of =*ka*' morpheme, as there is a dedicated 'zero' allomorph already.

that the speaker uttered. The lack of =*ka* which expresses addressee evidence only occurs when there is inferential or secondary evidence for an event. Where there is direct evidence, =*ka* appears as expected. Examples (3) and (4) illustrate the distinction between the appearance and lack of =*ka*:

- (3) *Context: I saw you getting up off the ground and ask what happened. You respond:*

Mo ai-n-omoa=Ø
 1SG CERT-1P-fall=Ø
 'I fell.'

- (4) *Context: You fell over earlier though I wouldn't have known anything unless you told me. You inform me:*

Mo ai-n-omoa=**ka**
 1SG CERT-1P-fall=**EVID**
 'I fell.'

Another example of this =*ka*/=Ø distinction can be seen in the next two examples:

- (5) *Context: You are behind me and can see that I am doing something but you can't tell what it is, so you ask what I'm doing. I would answer:*

Mo du-i n-iho=Ø
 1SG food-DEF 1P-eat=Ø
 'I am eating'

- (6) *On the other hand, if you called me and asked what I was up to, I would answer:*

Mo du-i n-iho=**ka**
 1SG food-DEF 1P-eat=**EVID**
 'I am eating.'

If it is indeed the case that the lack of =*ka* where one would expect it to appear means that there is evidence held on the part of the addressee, then the appearance of =*ka* in so many sentences would be accounted for, as well as the smaller number of occurrences where =*ka* does not appear. This distinction resurfaces throughout the study in order to help establish a semantic profile for =*ka*.

The debate concerning whether or not evidentials are epistemic modals, or whether they are in a separate class of their own, plays a major role in this thesis. In order to interact in this debate, the outcomes of the tests carried out on =*ka* will hopefully be able to show whether =*ka* should be classed as a dedicated evidential, an evidential classed under the branch of epistemic modality, or some other type of modal. Although much debate has occurred around both the tests and the outcomes of these tests in recent years, the tests and the debate should help to not only decipher the

meanings and value of =*ka* in the Urama language, but also aid in the greater ongoing debate in the area of evidentiality in linguistics.

1.5.2 Source of data and methodology

The current data on the Urama language used in this study was collected by the author, other postgraduate students, and staff at the University of Auckland over a period of two and a half years. The data was collected mainly through elicitation sessions with a native Urama speaker (Karika) and these sessions were conducted in English as this was the *lingua franca*. The material that has been collected on Urama consists of a lexicon/dictionary of around 1100 words, three narratives which were recorded and then transcribed, and around 2000 sentences which were gathered during elicitation sessions (Brown, Muir, Craig, & Anea, in prep). All of the data that is being used for this study was checked and re-elicited for accuracy.

1.5.3 Structure of the thesis

The focus of this thesis is the clause-final particle =*ka*, a possible evidential marker. Chapter 2 focuses on providing a detailed description of the area of modality and evidentiality, looking at both the field in general, as well as in relation to the phenomena in Urama. The main focus is on the ongoing debate as to how evidentials should be classified semantically. Chapter 3 provides an analysis of the morphosyntactic distribution of =*ka* and =*ra*, it investigates the different functions of the morpheme =*ra*, and examines the evidential functions of =*ka*. In chapter 4, the theoretical tools and tests needed to help determine the meaning of =*ka* are employed, and in turn an analysis of the outcomes of these tests provided, as well as a discussion on addressee-oriented evidence. Finally, a detailed summary of the thesis is given.

2. Modality and evidentiality

This study intends to provide an account of the clause-final *=ka* and *=ra* morphemes in Urama. Also, given the brief discussion of the examples above, a background of modality and evidentiality in general is provided. Through the use of this background study, in conjunction with undertaking semantic tests to determine the evidential status of *=ka*, the study aims to determine how *=ka* fits into the wide range of views that are in the literature.

2.1 What is evidentiality?

Evidentiality is used to show the evidence that a speaker has for the statement they are making. It “is a linguistic category whose primary meaning is source of information” (Aikhenvald, 2004, p. 3). Evidential particles mark the information source of the utterance, indicating how the speaker learned about what they are saying, providing the type of evidence (such as visual, reportative, direct, and indirect) they have for their claim. In order to understand what an evidential does, take the example below (modified from Waldie, 2012, p. 1):

- (7) There is supposed to be a farmer’s market in Sanson today.

In (7), we are provided with a lot of information. First, there is the proposition – that *there is a farmer’s market in Sanson today*. The second piece of information given in the example is the way in which we came about knowing the proposition. In claiming that ‘There is supposed’ to be a farmer’s market, the speaker is asserting that they have some kind of evidence that the proposition is true. This evidence could be that the speaker was told about the market. In comparison to this, we could say:

- (8) There must be a farmer’s market in Sanson today.

Sentence (8) could be uttered if the speaker saw people setting up tables where the farmer’s market is usually located, and perhaps they have boxes of vegetables with them. While both (7) and (8) express the same proposition – that *there is a farmer’s market in Sanson today*, the evidence types for the proposition differs. Evidence for example (7) is based on someone telling the speaker about the market, while the evidence for (8) is first hand direct evidence, which came from seeing people setting up for a market.

Matthewson (2011) describes an evidential as being something which “encodes information about the speaker’s source of evidence for the proposition being advanced” (p. 334). Nuyts (2006) explains how evidentiality traditionally covered only grammatical expressions. The English language does not

really have forms such as these, though the modal auxiliary “*must* is a possible, though not uncontroversial, exception” (Nuyts, 2006, p. 10). Faller (2002) uses the term evidentiality “to refer to the grammatical encoding of the speaker’s (type of) *grounds* for making a speech act, and the term *evidential* for the grammatical markers of evidentiality” (p. 2). Faller explains that “cross-linguistic studies... have identified three main types of source of information that are encoded by evidentials: direct access (in particular perception), reports from others, and reasoning” (Faller, 2002, p. 4).

Evidentiality encodes a speaker’s assessment of the evidence that the speaker has for their utterance. Payne (1997) describes evidentiality as having to do with the way in which “languages express relative certainty of truth” (p. 251), which is very similar to epistemic modality, while Chafe and Nichols (1986) describe evidentiality as “the linguistic coding of epistemology”. Epistemology refers to the way that people obtain and evaluate knowledge, since everyone obtains knowledge about the world around them from different sources. Languages usually use morphosyntactic devices in order to express different attitudes toward knowledge (Payne, 1997). Chafe and Nichols (1986) contains a number of papers on aspects of evidentiality across a range of languages. The data and analyses in this book show much about what they regard as “‘natural epistemology’, the ways in which ordinary people, unhampered by philosophical traditions, naturally regard the source and reliability of their knowledge” (p. vii). Chafe and Nichols (1986) explore the ways that languages both agree and differ with respect to different aspects of evidentiality, and explore the different devices which are available to be employed by speakers of these languages.

Although English does not have dedicated evidential markers (Aikhenvald, 2004), evidential-type meanings can be expressed through the use of adverbs, modals, or verbs (Peterson, Déchaine, & Sauerland, 2010; Chafe, 1986). For example, English adverbs include:

(9) **Apparently**, it’s raining.

(10) **Actually**, it’s raining

Example (9) gives us an example of an indirect inferential evidential meaning in English. The speaker has evidence through inference that it is raining – perhaps the speaker sees someone come into the shop with a wet umbrella. In (10), the use of ‘actually’ suggests that the speaker has some type of knowledge that is different from what they may have expected. For instance, you were in a building where you were unable to see outside and someone told you it was sunny outside (which they knew because they saw the weather on the television the night before), but someone else just came into the

building and informed you that it is raining, so you state that *actually* – contrary to what you were just told, it is raining.

The English epistemic modal *must* is able to be used to encode indirect evidence. In example (11) the speaker may notice some water drops on the window, and infer from this that it is raining outside:

- (11) It **must** be raining.

Finally, verbs are also able to encode evidential-type meanings in English – though they are not evidentials in themselves:

- (12) It **looks** like it is raining.

In (12) the speaker has visual evidence that it is raining – they may see people walk in dripping wet, and carrying wet umbrellas (Peterson et al., 2010).

Aikhenvald (2004) provides us with an example from the Tariana language where a number of different evidential markers are used to indicate different sources of evidence. Aikhenvald (2003) explains how evidentials may be marked with clitics, the clitics may not always attach themselves to the verb, but they are still able to scope over the entire clause. Here the Tariana evidential *-ka* marks visual evidence, as well as recent past tense:

- (13) Juse irida di-manika-**ka**
 José football 3sgnf-play-REC.P.VIS
 ‘José has played football (we saw it).’ (p. 2)³

In Tariana, a different morpheme *-mahka* marks non-visual evidence and recent past (ex. 14). *-nihka* marks inferred evidence and recent past (ex. 15). *-sika* marks assumed evidence and recent past (ex. 16), and finally, *-pidaka* encodes reported evidence and recent past tense (ex. 17):

- (14) Juse irida di-manika-**mahka**
 José football 3sgnf-play- REC.P.NONVIS
 ‘José has played football (we heard it).’ (p. 2)

- (15) Juse irida di-manika-**nihka**
 José football 3sgnf-play- REC.P.INFR
 ‘José has played football (we infer it from visual evidence).’ (p. 2)

³The glosses found in the original sources from other authors do not appear in the glossary of morphemes. Only the glosses from the Urama examples are included.

- (16) Juse irida di-manika-**sika**
 José football 3sgnf-play- REC.P.ASSUM
 ‘José has played football (we assume this on the basis of what we already know).’ (p. 2)
- (17) Juse irida di-manika-**pidaka**
 José football 3sgnf-play- REC.P.REP
 ‘José has played football (we were told).’ (p. 3)

As Aikhenvald (2004) explains, evidentiality proper does not have anything to do with providing proof for the argument that the speaker is uttering, or indicating the truth of the proposition, but rather, that evidentials are employed solely to supply information about the source of evidence for the utterance. Therefore, although the evidential markers in the above examples from Tariana express different sources of evidence for the information provided, the evidentials do not provide commitment to the truth of an utterance, or belief in an utterance.

2.2 What is modality?

Modality, as defined by Palmer (1986) is the “grammaticalization of speakers’ (subjective) attitudes and opinions” (p. 16). Modality expresses the degree of certainty that a speaker has for the intended meaning of an utterance. It encodes the speakers’ attitudes to propositions or events and covers a wide range of meanings, including deontic (obligation or permission), optative (hope or wishing), and epistemic (showing the speaker’s evaluation or judgment of a proposition or event). Modals are grammatical particles used to describe the “speaker’s attitude toward a situation, including the speaker’s belief in its reality, or likelihood” (Payne, 1997, p. 244).

The notion of modality is one that has been discussed widely, resulting in different theories on the subject throughout the literature. Payne (2006) describes modality as encoding speakers’ “attitudes or evaluations of the information expressed” (p. 123). Searle and Vanderveken (1985) describe modality as being an aspect of illocutionary force (the combination of the illocution point and the attitudes or presuppositions that come with the point) which signals the illocutionary point (basic purpose for producing the utterance) of the speaker. Illocutionary points are used to assert, to commit to doing something, to bring about a state of affairs, or to express an attitude towards something, while illocutionary force distinguishes between acts such as asserting, promising, inquiring, and ordering. Modality is an aspect of illocutionary force indicated by grammatical devices, which in turn express the intent of the speaker’s utterance, or their degree of commitment to the proposition.

The terms *mood*, *mode*, and *modality* are often used interchangeably in the literature, though many linguists make distinctions between the terms. Modality is the grammatical marking of the speaker’s

attitude or view as to the possibility or necessity of the proposition they are expressing. In English, there is a large repertoire from which to describe things as being unquestionably true, such as in the example, “It is raining”, where there is no doubt in the speaker’s mind that it is currently raining. However, in English, there are many occasions when it is necessary to describe that while an occurrence may not be unquestionably true, there is still some degree of reliability behind what is being stated, for example, ‘It is probably raining’ or ‘Maybe it is raining’ (Chafe & Nichols, 1986). Modal auxiliaries in English help to express an inference that comes from evidence of some description, such as with the English modal *must*:

- (18) Sarah must be at work.

As far as the speaker knows, in all possible scenarios that are compatible with the speaker’s knowledge, Sarah is at work. However, this does not mean that it is *definitely* the case that she is at work (i.e. ‘Sarah is at work’). The speaker did not necessarily see Sarah at work, but the speaker believes that out of all possible worlds, Sarah has to be at work. Although English modals appear to express evidential types of qualities, they are not evidentials because they do not encode information about the *source* of the evidence for an utterance, but rather the degree of certainty that the speaker has for their utterance. Aikhenvald (2004) explains that English does not have evidentials as dedicated morphemes. Under her view, there is no evidentiality in English. So in comparison with the examples from Tariana above, English has no equivalent (dedicated) evidential-type marker.

Different modalities signal different meanings. Nuyts (2006) explains how there are many different views as to how the different modal categories should be classified. He claims that they should be sorted in terms of either their semantics, or the status of the evidentiality of the modal. However, the three main modal categories are typically seen as being *dynamic modality*, *deontic modality*, and *epistemic modality*, though *agent-oriented modality* and *speaker-oriented modality* may also appear in the literature. Palmer (1986) describes how epistemic modality is concerned with the knowledge, beliefs, or opinion of an utterance while Payne (1997) explains that “epistemic” is to do with the “speaker’s degree of commitment to the truth of the proposition” (p. 246). Epistemic modals are used in order to express what the speaker knows about the utterance they are producing. For example, English *might* expresses possibility:

- (19) There *might* be someone home.
I *might* come tonight.

Payne (1997) states that the term “deontic” derives from the same root as English *debt*. In accordance with this, “deontic mode expresses the subject’s duty or obligation to perform the irrealis act expressed by the verb” (p.246). Palmer (1986) describes deontic modality as relating to obligation or permission. An example from English of deontic modality is the use of *may* to express permission:

- (20) You *may* leave at 3 o’clock.
 You *may* eat an orange.

English *must* is able to be used in both an epistemic sense as well as a deontic sense. We can see the difference between the following two examples, where the epistemic *must* expresses probability, whereas deontic *must* expresses obligation:

- (21) Epistemic *must*:
 She *must* be home by now.
 They *must* have left already.

- (22) Deontic *must*:
 You *must* do the dishes.
 You *must* go to school.

Bouletic modality has to do with desire. Portner (2009) explains that ‘bouletically accessible worlds are those in which one’s desires are satisfied” (p.37). In example (23) below, all such worlds in which the subject would be satisfied are worlds in which she tries the cake:

- (23) Given how you like chocolate, you should try this cake (Portner, 2009, p. 36).

Matthewson (2013) explains that circumstantial modals are used to make statements about possible things that may have happened or could happen. For example:

- (24) Hydrangeas can grow here (Kratzer, 1991, p. 646)

- (25) He might have won the game (Condoravdi, 2002, p. 4).

In (25), the context could be that “at that point he might (still) have won the game but he didn’t in the end” (Condoravdi, 2002, p. 4).

Modals are quantifiers over possible worlds, which allow “different interpretations depending on which subset of possible worlds is [being] quantified over” (Matthewson, 2013, p.350). Kratzer (1981) describes possible world semantics in which modal expressions are seen as quantifiers over

possible worlds. The interpretation of the modal in question is determined by the possible worlds that it scopes over. A ‘world’ in this sense is a set of propositions. These ‘worlds’ are different possibilities of what the actual world *could* be like. The proposition takes these ‘worlds’ and gives truth values, where the proposition is said to be true. Kratzer (1991) discusses the idea of accessibility relations from which the idea of epistemically possible worlds comes into play. Kratzer explains that an “accessibility relation is a binary relation on the set of all possible worlds” (p. 642) and goes on to explain that accessibility relations correspond to notions such as the idea of something being epistemically accessible. Kratzer (1991) explains how modal words are often ambiguous in meaning, giving us this example of an epistemic reading of *must*:

- (26) Jockl must have been the murderer.
(in view of the available evidence, Jockl must have been the murderer)

As we can see, this differs from the deontic reading of *must*:

- (27) Jockl must go to jail.
(in view of what the law provides, Jockl must go to jail) (pp. 639-640)

2.3 What is epistemic modality?

In this study the main area of modality being explored is epistemic modality, where the epistemic modal provides details of the degree of commitment that the speaker holds to the proposition they produce. Epistemic Modality is a branch of modality which is involved with the speaker’s belief in the expressed proposition, their knowledge, evaluation, or judgment, or their degree of certainty as to the truth of the proposition uttered. Put simply, epistemic modality refers to the way in which a speaker may communicate their doubts, certainties, and assumptions through the use of specific morphemes in language. An example of epistemic modality is given in (28):

- (28) I doubt that it rained yesterday.

In example (28) it can be seen that the proposition *it rained yesterday* is scoped over by the epistemic modal *doubt*. The speaker’s degree of belief in the proposition may come from, for instance, the fact that the soil is dry in the garden and appears to have not received water in a long period of time. This would provide the speaker with enough evidence to know that it is unlikely that it rained yesterday, or else the soil would be at least a little damp.

Out of the main modal categories, epistemic modality is the most controversial, and the one most central to the topic of this thesis. Basically defined, epistemic modality is concerned with expressing

the “degree of probability of the state of affairs [of an utterance]” (Nuyts, 2006, p. 6). Kaufmann, Condoravdi, & Harizanov (2006) describe the importance of *modal force* in the study of modality. They explain how it is “an integral part of the lexical meaning of all modals” (p. 80). Modal force can have a range of different values covering necessity and possibility, deciding whether something may have a strong or weak possibility of occurring, for example. Modal force includes expressions of graded modality such as *more likely than* and *barely possible* (Kaufmann et al., 2006). Matthewson, Davis, & Rullmann (2007) state that the evidentials in St’át’imcets do not specify modal force, as they do not encode differences in quantificational force (strength).

Throughout the literature there is a debate over whether evidentials are a subset of epistemic modality (i.e. a class of modality) or whether they are a completely separate category. For example, Matthewson (2011) describes evidentials as encoding information about the evidence that the speaker has for the proposition they are uttering, while claiming that in comparison, an epistemic modal “is something which introduces quantification over epistemically accessible possible worlds” (p. 334). This can be explained through the use of an example from Rullmann, Matthewson, & Davis (2008, p. 339) from St’át’imcets:

- (29) t’cum k’a kw s-John
 win(MID) INFER DET NOM-John
 “John must/may have won.”

The above example means that approximately “for a specific subset of epistemically accessible worlds *W*, John won in all worlds that are members of *W*” (Rullmann et al., 2008, p. 339). There are a number of possible scenarios which could work here. First, the speaker could know that John played poker last night, and he is now spending lots of money today. The modal base here would encompass all possible worlds (all possible scenarios) in which John had played poker last night, and was now spending money today. The evidential interpretations of the morpheme in question are based on which subset of possible worlds is chosen.

2.4 Studies in modality and evidentiality

The area of modality and evidentiality is a large field of study where there is currently much debate. Discussion surrounding the relationship between modality and evidentiality centres on the question of how to categorize the phenomenon of evidentiality, trying to determine whether evidentiality should be classed as a subset of modality (namely epistemic modality), or whether it is a separate concept in itself. A number of different stances have been taken as to how to treat evidentials. Due to the fact that all languages are different and therefore express propositions in different ways, there is of course

the option that evidential systems vary between all languages, with some evidentials acting as epistemic modals, while other languages contain evidentials which cannot, or do not, behave as modals and are therefore possibly non-modal evidentials.

Evidentiality has been treated as a branch of epistemic modality that signifies the speaker's judgment of the evidence they hold for the claims they are making (Palmer, 1986; Chafe & Nichols, 1986). Morphemes which mark evidentiality can encode whether the act being described was witnessed directly (i.e. visual), or whether the information came from somewhere else – such as someone telling them (i.e. reported) (Aikhenvald, 2004). In this way, evidentiality can be divided into two parts, the first being direct evidentiality, showing that the speaker themselves witnessed the act, and the second being indirect evidentiality, showing that the speaker found out the information through someone else or through inference (de Haan, 2006). Like indirect evidentiality, epistemic modality involves reasoning from different facts, rather than “direct confrontation with the event or situation reported” (Garrett, 2001, p. 48). Aikhenvald (2004) explains that while visual evidentials are used to refer to something that is seen, direct evidentials encompass what is seen, but can also be used to refer to evidence from the other senses such as hearing, taste, and smell.

Faller (2002) provides a non-modal analysis of evidentials. Faller argues that the Quechua reportative *-si* is non-modal, observing that in contrast, “a speaker using English epistemic *may* or *must* cannot know for a fact that the embedded proposition is not true” (Faller, 2002, p. 194). For example,

(30) Sarah *may* be at school.

(31) Sarah *must* be at school.

Each of the above examples using *may* and *must* do not contain evidence that Sarah is definitely at school. The examples show only that there is an expectation that she is at school.

Faller argues that although a distinction should be made between evidentiality and modality, the two overlap. She claims that this is due to there being languages which fall into different categories. These categories include firstly, languages that have pure evidentials; secondly, languages with morphemes that contain elements encoding both evidential *and* modal values, and finally, languages which contain only pure modals. She discusses whether it is possible that evidentials could implicate a modal value, or whether certain types of evidence always determine the same degree of certainty, arguing that the latter is not the case. Faller explains that it is important to study carefully whether a particular element encodes or implicates an evidential or modal value. It is only when it encodes an

evidential value that it can be called an evidential, and only when it encodes a modal value, can it be called a modal. Faller then observes the relationship between evidentiality and epistemic modality, questioning whether they belong to the same level of meaning.

Tests for propositional vs. illocutionary content are relevant when discussing levels of meaning. While modality is a relationship between the source of information and the proposition or situation expressed, illocution is a relationship between the speaker, the addressee and the proposition produced by the speaker. Illocution sits at a higher level of meaning than propositions, while propositions are at the propositional level of meaning; illocutions are at a sentential level.

Illocutionary acts take propositional arguments as part of the illocutionary utterances that are produced by a speaker, while the propositional content of a sentence is the part of the sentence which expresses something as being true or false. While assertions are illocutionary acts in that they involve a statement of belief given by the speaker, propositions are not, “although the act of expressing a proposition is a part of performing certain illocutionary acts” (Searle, 2000, p. 257).

Searle (1969) develops what is known as the speech act theory, which was originally introduced by Austin (1962). Speech acts are acts that a speaker performs in producing an utterance. The utterance could be making reference to something or predicting something – a propositional act, or the act could involve having a particular intention in making the utterance – illocutionary force (Searle, 1969). Searle mostly focuses on the illocutionary acts that are performed by a speaker, and provides some examples of English verbs which denote illocutionary acts, such as “state”, “warn”, “command”, “request”, “promise”, “demand”, and “describe”. Even though the following examples in (32) involve different illocutionary acts, they all have the same propositional act:

- (32) *You go home.*
 Do you go home?
 Go home!
 How I wish you'd go home! (Searle, 1969)

If something is illocutionary, it is a linguistic act that is performed by a speaker when producing an utterance in order to fulfil something. Illocutionary utterances may be used to suggest something, promise something, request something, or a range of other acts. An illocutionary act is the purpose for which something is said or expressed; it is the “type of function the speaker intends to fulfil” (Huang, 2007, p. 102). An illocutionary act is an act which is accomplished through the use of an utterance in order to produce an intended outcome. This can be explained through the use of example (33):

- (33) John says to Mary, “Pass me the glasses, please.”

In the above example, John is performing the illocutionary act of requesting or ordering Mary to hand the glasses to him (Huang, 2012, p. 147).

The semantic tests involving propositional and illocutionary acts are needed to help determine when an element is part of the proposition expressed and when it is not. Faller argues that evidential meaning is encoded by all three enclitics in Quechua that are under investigation in her thesis, and that this meaning is part of the illocutionary level. This claim is supported by the fact that they cannot occur in non-illocutionary environments and that their evidential force does not interact with clear cases of propositional operators, such as negation, and that they instead interact with illocutionary operators such as the question operator in content questions. Faller (2002) explains that all evidentials are not equal and should therefore be treated differently. Faller also argues that the Quechua evidentials are not performatives in the speech act theoretical sense, since uttering a sentence containing them does not make it true. In speech act theory, we saw that a speech act is an illocutionary act which in turn does not express a truth value. However, these illocutionary modifiers are still able to add or change any felicity conditions that are associated with speech acts (Faller, 2002). The truth condition of a sentence is distinct from the meaning of the sentence. It expresses precisely when the proposition is considered to be true. For example, in the sentence:

(34) It is raining in Auckland.

The above sentence is true exactly at the time that it is raining in Auckland.

Peterson (2010) provides a detailed description of evidentiality in Gitksan. Peterson provides both a modal and a non-modal analysis of the evidentials. This work contains an analysis in which some elements of language may provide both evidential *and* modal functions at the same time. The result is that they are evidentials which are also epistemic modals, though which contain some other restriction about the source of evidence.

2.5 The relationship between evidentiality and epistemic modality

As previously mentioned, there is currently a debate as to whether or not evidentiality should be considered a part of the category of epistemic modality, or whether it should be treated as a separate category altogether. However, there is the possibility that there is a mid-way point which includes a sub-category of evidentials which are also epistemic modals, bearing both modal and evidential properties (Kratzer, 1991; Garrett, 2001; Matthewson et al., 2007; Waldie, Peterson, & Rullmann, 2009; Peterson, 2010; Matthewson, 2011). The findings of the present work on the status of *=ka* as an

evidential in Urama is vital in determining which group it fits into, and it will be interesting to compare these findings with the findings of others.

The first possible area for evidentials to belong is as a sub-set of epistemic modality. This view is advanced by different authors (including Palmer 1986; Matthewson et al. 2007) and the idea is that evidentials are seen as “linguistic markers that indicate the speaker’s type of evidence for her claim and/or the degree of its reliability, probability or certainty” (Peterson, 2010, p. 18). Palmer (1986) applies the term “epistemic” to modal systems involving the notions of necessity and possibility as well as to those modal systems which indicate the degree of commitment the speaker holds for what she says (p. 51). This view encompasses quotative evidentials such as ‘report’ or ‘hearsay’ or evidence from the senses. Palmer describes declaratives as being ‘unmodalised’ members of epistemic modals. Declaratives can be included as epistemic modals because in using a declarative utterance the speaker expresses their own opinion, and makes a modal judgment that what they are saying is true. However, the declarative is said to be ‘unmodalised’ due to being a basic statement of fact. Looking back to Brown (2009), where the particle *ka* was treated as a modal declarative marker, it is easy to see how this categorisation of the morpheme came about. However, through further elicitation and research, it is apparent that there is more to *=ka* than just serving as a declarative marker.

Palmer (1986) argues that evidentials (including the quotative) are a sub-system of “reports” which is one of two systems that make up epistemic modality – the other being judgments (p. 53). Palmer distinguishes between four different types of epistemic modality; the first one being a degree of confidence in the truth of the statement, while the others are evidential-type categories. Palmer places both epistemic modality *and* evidentiality under the category of propositional modality. de Haan (2006) explains that his reasoning for placing evidentiality in the category of modals is,

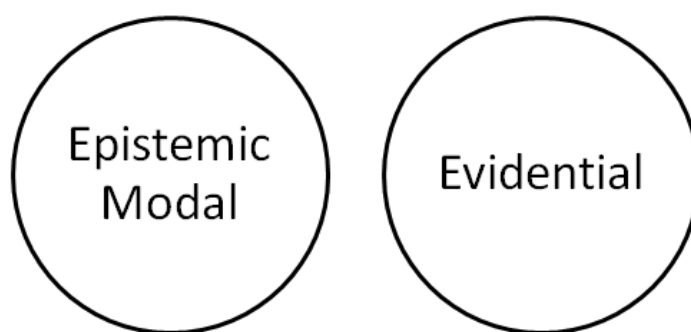
the belief that one is inherently less certain about actions one has not witnessed than about those one has witnessed. This belief is anchored in the fact that when one sees something with one’s own eyes, one tends to accept that sight as a true representation of the world while a second-hand report is viewed with more suspicion. Hence, indirect evidentiality presents the action as less certain than does direct evidentiality (de Haan, 2006, pp. 57-58)

Non-modal evidentials are categorized as being completely separate to modality. Those who believe that evidentials are a separate category to modality view evidentials as linguistic markers which are

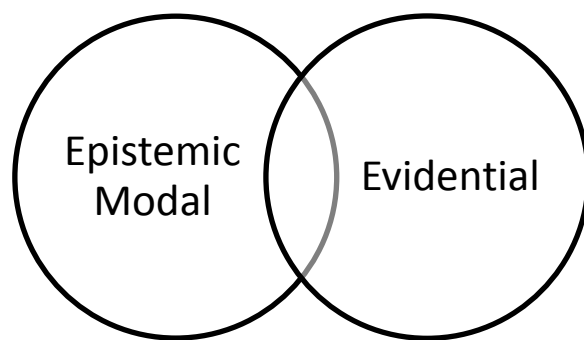
used to encode the type and source of evidence that the speaker has for the proposition (de Haan, 1999; Faller, 2002; Aikhenvald, 2004). de Haan (1999) provides a detailed look into the relationship between evidentiality and epistemic modality, explaining that the two categories differ in terms of semantics. While evidentiality is the coding of the source of information used to “assert the nature of the evidence for the information in the sentence” (p. 1), epistemic modality is categorized as being the coding of the degree of commitment on the part of the speaker to the statement that they have produced, evaluating the speaker’s commitment to their utterance.

The third side of this argument includes those who believe that there are parts of language which encode both modal *and* evidential values. This group claims that there could be “a subset of evidentials which are epistemic modals with an extra restriction about evidence source” (Matthewson, 2011, p. 335). This point of view can be found in Kratzer (1991), Garrett (2001), Matthewson et al. (2007), Waldie et al. (2009), and Peterson (2010). Von Stechow and Gillies (2007) claim that evidentials are separate from epistemic modals, although also suggest that perhaps epistemic modals might “incorporate a kind of evidential meaning component” (p.39). So this claim is that epistemic modals are a subset of the category of evidentials rather than the other way around. Faller (2002) takes a strong stance in differentiating between evidentiality and epistemic modality, arguing that although evidentiality and epistemic modality are overlapping linguistic categories, they are also distinct categories. She explains that the decision for treating them as separate categories is because she treats “modals and evidentials as *encoding* a modal and evidential value, respectively. These definitions leave open the possibility that modals implicate an evidential value and that evidentials implicate a modal value” (Faller, 2002, p. 94).

The findings of the present study on the evidential =*ka* in Urama should be informative in this debate. The outcome of the semantic tests mentioned above help to provide information about the evidential and/or modal values that =*ka* encodes. We may find that =*ka* falls into the category of either evidentials (separate from the modal system) OR modals:



Or, the findings may show that $=ka$ is a mixture of the two categories:



The findings of this present study will aid in the debate on how to treat evidentials. The tests help to determine whether $=ka$ is functioning at the propositional or illocutionary level of meaning, and therefore whether $=ka$ is an epistemic modal evidential or a non-modal evidential. If the outcome of this thesis shows an illocutionary/propositional split in the functions and meaning of $=ka$, then perhaps $=ka$ should be placed into a category where evidentials express both evidential *and* epistemic modal values. The outcome as to how to categorise $=ka$ as an evidential, can only be satisfied through the use of the semantic tests in the following chapters, and through background research on modality and evidentiality. Using the narratives that were collected and transcribed and the textual data/sentences which have been elicited, this study aims to decipher the workings of the modal and evidential system of the Urama language.

2.6 The theoretical tools – the tests

Evidential interpretations generally contain different levels of meaning. ‘Levels of meaning’ refers to the different levels of meanings on which propositional and illocutionary arguments are found. While propositional arguments are solely propositions and so occur solely at the propositional level of meaning, illocutionary arguments are speech acts which take place at the sentence level. Here we discuss tools which can be used to help determine the level of meaning of $=ka$, and in turn show how this relates to whether it is an evidential or a modal. A number of tests can be used to help decipher the meaning of the particle. This collection of tests has been used historically in the literature (Garrett, 2001; Faller, 2002; Matthewson et al., 2007⁴; Papafragou, 2006; Waldie et al., 2009), and has undergone some modification over time. The tests as they are used in this study came from Peterson (2010). These tests should help decide which analysis – a modal analysis or a non-modal

⁴ Matthewson (2011) tests non-modal analyses against an evidential in St’át’imcets that had not been analysed previously. She argues that in the usual diagnostic tests, such as the “known truth or falsity” test and the “cancellability” test, the non-modal approaches do not make different empirical predictions from one another.

analysis is more appropriate for $=ka$. We are looking at these two analyses to decide whether $=ka$ is an epistemic modal, or whether the evidential is a separate category acting as a speech act operator.

These tests focus on the evidential morpheme $=ka$. Due to the fact that the allomorph $=ra$ is typically employed in imperatives and interrogatives, which are both illocutionary in nature, it is able to be controlled where the morphemes may or may not appear.

2.6.1 Determining levels of meaning

In order to discover the level of meaning of $=ka$, we utilise these tests which help to determine whether the evidential marker operates at the illocutionary or propositional level. The tests are split into truth value tests, and scope and embeddability tests. The tests that were conducted for this study that involve truth values include the Known Falsity/Truth test, the Assent/Dissent test, and the Cancellability of Evidence Type Requirement. The test involving Scope and Embeddability is the Embeddability test.⁵

The different levels of meaning refer to propositional and illocutionary levels. While a propositional level of meaning occurs in propositions, the illocutionary level of meaning is at the sentence level of a clause. There is a basic difference between the semantics and pragmatics of the two. Propositions contain a semantic meaning, while illocutionary things on the other hand, are speech acts.

Illocutionary acts contain additional pragmatic meaning and force. The following example provides a distinction between propositional and illocutionary arguments:

(35) Shut up!

The proposition *shut up* just means (the denotation of) [[shut up]]. As an imperative, and therefore an illocutionary operator, the act of saying *shut up* is an endeavour to get something accomplished – to get someone to stop talking. The illocutionary force of this statement holds additional pragmatic meaning that states, ‘be quiet’.

2.6.2 Static Semantics: evidentials as epistemic modals

Once the tests determine which level of meaning $=ka$ operates at, the appropriate theoretical analysis may be used in order to provide a profile for $=ka$. This is either a static semantic analysis where the

⁵ Another test involving scope and embeddability which is found in the literature is the scope with respect to interrogatives test (Peterson, 2010; Matthewson et al., 2007; Faller, 2002). However, this test is not helpful to this study as the morpheme $=ra$ appears on all interrogatives, and does not provide evidence of any description for either the speaker or the addressee. It is unable to indicate anything other than the fact that it marks the statement as an interrogative.

evidential is analysed as a type of epistemic modal, or a dynamic semantics approach where the evidential is analysed as a speech act operator. Peterson (2010) explains that static semantics and dynamic semantics are not “mutually exclusive”. He explains that evidentials which come under the static semantics approach can also have a dynamic semantics and are therefore able to implicate other types of meaning. This, however, does not always work in reverse. Evidentials operating on an illocutionary level of meaning may not have a static semantic meaning. If evidentials under a static semantics approach are able to have a dynamic semantic, the evidential in question should be able to express both modal and non-modal values.

Under the static semantics approach, evidentials are basically treated as epistemic modals. They operate at the propositional level of meaning and aid in determining the truth conditions of the proposition they affect. In other words, a static semantics approach is based on “the fixed meanings of an evidential” (Peterson, 2010, p. 15)

2.6.3 Dynamic Semantics: evidentials as illocutionary operators

In opposition to static semantics, if the tests determine that $=ka$ acts as an illocutionary operator, then $=ka$ is a non-modal evidential, and so the evidential would be in a different category than epistemic modals. This means that the evidential is used to express an illocutionary act which is “the type of action he or she intends to accomplish in the course of producing an utterance” (Huang, 2012, p. 147). Dynamic semantics is to do with “how the felicity of certain evidentials is constrained by and affects the discourse context” (Peterson, 2010, p. 15).

Peterson (2010) describes how, as well as in a static semantics, presupposition is also needed for a dynamic semantics approach when determining the felicity of a non-modal in discourse. He explains that while epistemic modal “evidentials have semantic presuppositions (definedness conditions on a proposition) that restrict the modal base worlds, non-modal evidentials carry a *pragmatic* presupposition which places a condition on their use in a conversation” (Peterson, 2010, p.23)

3. =ka and =ra

This chapter provides an overview of the relationship between the two clause-final morphemes =ka and =ra. These particles appear fairly consistently throughout the language, where =ka tends to appear in declarative contexts and =ra in interrogatives. The morphemes act superficially like clause-typing particles, and they appear clause-finally (apart from non-singular number markers) which would be a typical position for clause-typing morphemes in head-final SOV languages. Blain and Déchaine (2007) explain how evidentials can fall into different subclasses depending on their syntactic position and they state that evidentials that come under the clause-typing domain typically express illocutionary force. Although =ka is likely not specifying clause-type specifically, it appears that clause-typing and the presence of =ka are strongly correlated.

In this section the morphosyntactic environments in which the two particles occur are explored in order to provide a solid background on how the particles behave within the language. The evidential particle =ka (not to be confused with the conjunction *ka*⁶) appears in many clauses in Urama. Due to this overwhelming use of =ka, it was initially assumed that =ka was a type of declarative marker encoding assertion, and the occasions where neither =ra nor =ka occurred were seen as anomalies. This point of view lines up with the views outlined in Brown (2009, pp.70-71), where Brown lists a number of factors used to describe where =ka does and does not occur. Brown posited that =ka occurs only on main clause affirmative statements. The hypothesis of this thesis is that =ka is an evidential marker. Further analysis provided evidence that =ka may encode that the *addressee* lacks some type of visual or inferential evidence for what is being said by the speaker, and the speaker has evidence for this lack of knowledge, while a lack of =ka signifies evidence on the part of the addressee.

The corresponding allomorph =ra, as discussed below, appears in complementary distribution with =ka. While =ka and =ra are in complementary distribution, they have different behaviours which are in part governed by those distributions. While =ka appears on declarative clauses, =ra is used to mark interrogatives and imperative statements. Both =ka and =ra play roles in the tense paradigm,

⁶ Although the =ka and =ra particles are being treated as separate from the conjunctions *ka* and *ra*, it is necessary to bring this up briefly as they appear to be related (at least by using the same morphemes). This could be an area for further research. These examples show both *ka* and *ra* as conjunctions:

John	ra	Karika	ra	taitui	iho=ka-ido.
John	and	Karika	and	yam	eat=EVID-DL
'John and Karika are eating yams.'					
Mo	ire	ka	mo	namu-i	nimoiti niro-hia=ka nimoiti mamui.
1SG	with	and	1SG	big.brother-i	1.DL love-really=EVID 1DL mother
'My big brother and I, we both love our mother.'					

though there is also a zero allomorph which appears in the paradigm where neither *=ka* nor *=ra* are employed (see Appendix A).

A condensed version of the verb paradigm for declarative sentences in Urama where *=ka* and *=ra* are concerned, is listed in the table below. The table uses the verb *odau* ‘to go’ and only illustrates the different tenses in the first person, though a full paradigm is listed in Appendix A:

Table 1: Tense Paradigm

Positive Polarity:	Singular subject	Dual subject	Trial subject	Plural subject
<i>Present and Immediate Past</i>	nodau= <i>ka</i>	nodau= <i>kaido</i>	nodau <i>bikaumo</i>	nodau= <i>kaumo</i>
<i>Near Past</i>	nodau <i>vaka</i>	nodau <i>vakaido</i>	nodau <i>bivakaumo</i>	nodau <i>vakaumo</i>
<i>Intermediate Past</i>	nodau= <i>ra</i>	nodau <i>dudo</i>	nodau <i>bidumo</i>	nodau <i>dumo</i>
<i>Distant Past</i>	ponodau= <i>ra</i>	ponodau= <i>raido</i>	ponodau <i>biraumo</i>	ponodau= <i>raumo</i>
<i>Near future</i>	odaui na’ <i>ai=ka</i>	odaui na’ <i>ai=kaido</i>	odaui bi na’ <i>ai kaumo</i>	odaui na’ <i>ai=kaumo</i>
<i>Distant future</i>	odaui no’ <i>u=ka</i>	odaui no’ <i>u=kaido</i>	odaui bi no’ <i>u=kaumo</i>	odaui no’ <i>u=kaumo</i>
Negative Polarity:				
<i>Non-future</i>	odaui <i>haka</i>	odaui <i>haka</i>	odaui <i>haka</i>	odaui <i>haka</i>
<i>Future</i>	odaui taho’ <i>o aike</i>	odaui taho’ <i>o aike</i>	odaui taho’ <i>o aike</i>	odaui taho’ <i>o aike</i>

3.1 *=ka*

First, this chapter looks at *=ka*, examining the locations in which it appears throughout the language. The chapter also looks at the morphosyntactic environments in which *=ka* appears, the ways in which *=ka* interacts with the tense paradigm of Urama, and the evidential functions of *=ka*.

3.1.1 *=ka* and its morphosyntactic environments

As mentioned, the clause-final morpheme *=ka* appears on main clauses. It appears on declarative sentences functioning as an evidential marker. Below, the morphosyntactic environments in which *=ka* occurs are discussed. Examples were taken from elicited texts, as well as a narrative (Brown et al., in prep).

The morpheme *=ka* appears clause-finally in both transitive and intransitive affirmative statements, as seen in the examples below:

- (36) umu-i obo-i ta imapeduo=**ka**
 dog-i water-DEF in swim=**EVID**
 ‘A dog is swimming in the water.’
- (37) kikio huna-i aimumuiai=**ka**
 bird big-DEF fly=**EVID**
 ‘A big bird is flying.’
- (38) nu ro mo hasi n-ema'ai=**ka**
 3SG AG 1SG hat 1P-give=**EVID**
 ‘S/he gave me a hat.’

=*ka* appears attached to the end of main clauses in most present and future tense contexts, whether or not a postpositional phrase or some other adjunct is present. The additional phrase or adjunct may occur inside the main clause, or outside the main clause, following =*ka*. (39) and (40) provide examples of both of these situations. The first example shows =*ka* at the end of the main clause with the additional subordinate clause following:

- (39) [[Mo era-i n-i-vaha'uti=**ka**] [mukoi ma adiai ri.]
 1SG firewood-DEF 1P-PO-chop=**EVID** fire PURP light for
 ‘I am chopping firewood to make a fire.’
- (40) [Mo ro ro [mo oto-hivio-i du-i to o'u-i ri]
 1SG AG 2SG 1SG birth-day-DEF food-DEF to come-DEF for
 n-a'o=**ka**.]
 1P-say=**EVID**
 ‘I am inviting you to my birthday party’. (I am saying to you, “Come to my birthday party.”)

The above example shows that the complement clause marker *ri* is used to mark the complement clause which is located within the matrix clause.

In some cases, with specific verbs – namely *umuo* ‘know’, *modobo* ‘able to, can’, *niro* ‘love, like, want’, and *iraromo* ‘think, hope’, the verb phrase containing these verbs and the subject of the matrix clause form their own clause followed by =*ka*, while the rest of the sentence is placed in a separate clause. These verbs are those which typically take a clausal rather than a nominal complement. In the example below we can see that the two main clauses – both including these main verbs, are marked with =*ka*:

- (41) [Nu umuo=**ka**] [ro ro orioi eidai a'ai=**ka**]
 3SG know=**EVID** 2SG AG game get FUT.do=**EVID**
 'He knows that you will win the game.'

In the above example it can be seen that the subordinate clause clearly follows the matrix clause, however, this is a non-canonical ordering, as the expected order is subject-[subordinate clause]-verb. Verbs of 'saying' and other bridge verbs function in the same way.

We can see below that the matrix clause involving =*ka* is separate from the rest of the sentence. =*ka* does not appear in the complement clause as =*ka* does not appear on relative clauses (because these are not propositions – they are arguments). The clause-final morpheme *ri* in this example means 'about, concerning, for', and encodes purpose or intent:

- (42) [Mo ro ai-n-iraromo=**ka**] [ro o'u-i **ri**]
 1SG AG CERT-1P-think=**EVID** 2SG come-DEF **for**
 'I hope you come.'

The particle =*ka* usually appears clause-finally and is only followed by optional number agreement with the subject. The examples below show how the dual suffix –*do* and the trial/plural suffix –*mo* (which are used to express agreement with the subject of the clause), are attached to =*ka*. This is one of the few cases where =*ka* is a proclitic:

- (43) John taitui iho=**ka**
 John yam eat=**EVID**
 'John is eating yams.'
- (44) Nimoit ro baba'oi n-ohiai=**ka-ido**
 1DL AG butterfly 1P-catch=**EVID-DL**
 'We both caught a butterfly.'
- (45) Ubi tuniha maketi oito odau=**ka-umo**
 people all market to go=**EVID-PL**
 'Everyone is going/walking to the market.'

An interesting difference between the elicited sentences and the narrative speech is that throughout the narrative, =*ka* appears without the –*ido* and –*umo* suffixes when they are expected to appear (due to there being a plural subject):

- (46) Umu keke-i ro bomo gema-i eve'a-i=**ka**.
 dog little.PL-DEF AG pig big-DEF see-DEF=**EVID**
 'The little dogs saw a big pig.' (narrative ex.14)

3.1.2 Non-canonical word order effects on the placement of =ka.

Situations where non-canonical word orders surface, may affect the typical clause-final location of =ka. Although there is a non-canonical word order in the example below, the sentence may be adjusted to follow the more canonical SOV word order. The agentive marker *ro* appears in the matrix clause along with the verbal auxiliary *modobo*, while the main verb *ididi* ‘build’ is outside the matrix clause and is following =ka:

- (47) Nu ro modobo=**ka** motoi ididi.
3SG AG able=**EVID** house build
‘He can build houses.’

However, the canonical order is also acceptable and there is no difference in meaning:

- (48) Nu ro motoi ididi modobo=**ka**
3SG AG house build able=**EVID**
‘He can build houses.’

Other constituents and adjuncts may also occur after =ka. =ka may be followed by postposed object nominals and postpositional phrases, as in examples (49) and (50):

- (49) Kuto niro=**ka** **turei**.
Kuto want=**EVID** **taro**
‘Kuto wants taro.’

- (50) Mo ai-n-odau=**ka** **maketi** **oito**
1SG CERT-1P-go=**EVID** **market** **to**
‘I’m going to the market.’

Object nominals and postpositional phrases (such as in the above examples) appear to be freer than other parts of the clause in Urama as they may be found preceding, within, or following the matrix clause.

3.1.3 *haka* and *hara*

The negative forms of =ka and =ra appear as *haka* and *hara*. Although there is a separate morpheme *ha* which functions as a tag, or potentially as a perfective marker (Brown, 2009), *haka* and *hara* are unable to be separated in order to have *ha* function as a negative form in itself. We are examining these morphemes and exploring where, when, and how they are able to be used.

3.1.3.1 *haka*

=*ka* appears as the negative non-future form *haka* on all negative statements where =*ka* can usually be found. There does not seem to be any evidence suggesting that *ha* carries any other negative meaning by itself – only when *haka* is formed, making *ha* a bound morpheme:

- (51) Mo omoa-i **haka**
 1SG fall-DEF **NEG.EVID**
 ‘I didn’t (just) fall.’
- (52) Mo pidgin vade-i a'o vadio-i **haka**
 1SG pidgin word-DEF speak HAB-DEF **NEG.EVID**
 ‘I don't speak Pidgin.’

Haka appears to function the same way as =*ka* in regards to sentence placement in both canonical and non-canonical word orders. The example below shows *haka* is placed at the end of the main clause, with only the postpositional phrase allowed to follow it:

- (53) Nu ha'o-i eidai **haka** nu turanai ne'eida
 3SG bag-DEF get **NEG.EVID** 3SG friend from
 ‘She did not borrow a bag from her friend.’

In the following example, *haka* appears twice, once in the matrix clause involving the verb *iraromo* ‘think’, and again at the end of the subordinate clause. Although the English translation only includes the one form of negation (*don't*), the second appearance of *haka* appears because both clauses need to be marked with *haka* if the entire sentence is in the negative.

- (54) Mo ro iraromo-i **haka** Ginau tuniha hivio-i obo
 1SG AG think-DEF **NEG.EVID** Ginau all day-DEF water
 oruo vadio-i **haka**
 wash HAB-DEF **NEG.EVID**
 ‘I don't think that Ginau washes every day.’

3.1.3.2 *hara*

Hara is used as the negative form of =*ra* in interrogatives. It appears in the same clause-final position that =*ra* would normally take. The examples below show that *hara* is used in the same position that =*ra* would be used in present, future, and past tense interrogatives. *hara* expresses that the interrogative is negative.

- (55) Ro na'u iho vadio-i **hara**
 2SG what eat HAB-DEF **NEG.INT**
 'What don't you eat?'
- (56) Ro taitui iho-i v-o'u **hara**
 2SG yam eat-DEF2/3P-FUT **NEG.INT**
 'Won't you eat yams?'
- (57) Ro wotu evea-i **hara**
 2SG what see-DEF **NEG.INT**
 'Who didn't you see?'

3.2 =ra

=ra appears to be an allomorph of =ka. Not to be confused with the conjunction *ra*, =ra is used in interrogatives, imperatives, conditional clauses and past tense contexts (see Appendix A). =ra is found in the majority of clauses where =ka does not appear. Like =ka, the particle =ra typically appears clause-finally unless plural subject markers are suffixed to it – with some exceptions such as in non-canonical word orders. The following examples show that =ra may appear canonically clause-finally, but that =ra may also be followed by complement clauses and adjuncts:

- (58) Mo motoi ma ididi ri pa-n-a'ai=**ra**
 1SG house PURP build for DP-1P-do=**PAST**
 'I was trying to build a house.'
- (59) Ro ro modobo ra mo ha'o-i om-ovaredio-i.
 2SG AG can INT 1SG bag-DEF BEN-bring-DEF
 'Please bring me my bag.'

3.2.1 Different functions of =ra

=ra undertakes a number of different functions in Urama. This section discusses the different uses of =ra, explaining where =ra may appear, and the different meanings it can express.

3.2.1.1 Conditional clauses

The morpheme =ra is used to mark the conditional in Urama:

- (60) Nimo ro modobo=**ra** nimo turanai titi omotiodai.
 1PL AG able=**COND** 1PL friend letter send
 'We will send a letter to our friend if we can.'

- | | | | | | | | | |
|------|--|----|--------|--------------------------------|-----|------|-----|-------|
| (61) | Ro | ro | pa'eia | ai-a-v-ihó= ra , | ro | gimo | ro | ohiai |
| | 2SG | AG | garden | CERT-Y/N-2/3P-eat= COND | 2SG | sick | 2SG | catch |
| | taho'o aike | | | | | | | |
| | NEG.FUT.EVID | | | | | | | |
| | 'If you eat your vegetables, you will not get sick.' | | | | | | | |
-
- | | | | | | | | |
|------|---|----|--------------|-------------------------------------|-----|----|----------|
| (62) | Ro | ro | merekeke-i | a-v-i-arodio= ra , | mo | ro | du-i |
| | 2SG | AG | children-DEF | Y/N-2/3P-PL-look.after= COND | 1SG | AG | food-DEF |
| | itai n-a'ai=ka | | | | | | |
| | cook 1P-FUT.do=EVID | | | | | | |
| | 'If you look after the kids, I will cook the meal.' | | | | | | |

The conditional clauses in Urama involving *=ra* are unusual. As we can see in the examples above, the 'if' clause where *=ra* appears also contains the present tense interrogative marking on the verb. This makes the English translation to (62) closer to, "Can you look after the children? I will cook the meal", rather than, "IF you look after the children, THEN I will cook the meal". However, this is still treated as a conditional clause as there are still two clauses where the fulfilment of the second clause is contingent on the fulfilment of the first.

The use of the *=ra* allomorph in these conditional clauses provides more evidence for the declarative/non-declarative difference between the two allomorphs *=ka* and *=ra*. While *=ka* appears in declarative contexts, *=ra* appears in non-declarative arguments since the conditional clause is not a free-standing declarative.

3.2.1.2 Interrogatives

In Urama, =*ra* is used as a question marker in most interrogatives:

- (63) Ro ro kava obo-i a-v-idio=**ra**
2SG AG kava water-DEF Y/N-2/3P-drink=**INT**
'Did you drink kava?'
- (64) Ro motoi ididi niro=**ra**
2SG house build want=**INT**
'Do you want to build a house?'

Just as non-canonical forms affect =*ka*, other items may on occasion occur after =*ra* in interrogatives. An example of this can be seen in the following utterance:

- (65) Ro niro-hia=**ra** ro himiha motoi ididi ri
 2SG want-really=**INT** 2SG own house build for
 ‘Do you really want to build your own house?’

In the above example, =*ra* occurs on the end of the matrix clause with the complement clause marked with *ri* following. This subordinate clause may appear before the matrix clause, within it, or after it as in the example above – there is some flexibility as to where complement clauses and other adjuncts may be placed.

3.2.1.3 Imperatives

Many imperative forms in Urama also employ the use of =*ra*. The imperative forms which contain =*ra* appear to express a bouletic type of modality, while other imperatives do not use =*ra*. Bouletic modals are to do with someone’s desire (Portner, 2009). Bouletic imperatives signal the speaker’s desire for the addressee to accomplish something. The examples from Urama typically express a *should* type meaning, and have a more optional nature, like a suggestion:

- (66) Na orioi emahibai=**ra**
 this game try=**IMP**
 ‘You should try out this game.’
- (67) Na eme-i emahibai=**ra**
 this skirt-DEF try=**IMP**
 ‘You should try on this skirt.’
- (68) Masisi ta adia=**ra**
 match at light=**IMP**
 ‘You should light it with matches.’
- (69) Ro ro emahibai=**ra** na nika-i
 2SG AG try=**IMP** this papaya-DEF
 ‘You should try this papaya.’

Other forms of imperatives do not necessarily take =*ra*. These imperatives with =*ra* are less suggestive:

- (70) Nahini ta omoti.
 here at wait
 ‘Wait here.’
- (71) I’a hini oito aruruti.
 that there to run
 ‘Run over there.’

- (72) Mo kika-i n-imaduo!
 1SG story-DEF 1P-tell.about
 ‘Tell me a story!’

There is some overlap between the imperative, interrogative, and conditional forms in Urama which all make use of *=ra*. This is seen with the interrogative forms used in some conditional clauses, and again there is some overlap with the interrogative *dudo* form appearing in intermediate past (yesterday) declarative forms (for which we have no explanation).

3.3 *=ka, =ra, and tense*

Both *=ka* and *=ra* appear in the verbal tense paradigm where they provide information as to the tense of the clause. Due to the fact that they include tense in their meaning, along with encoding other meanings, it can be difficult on occasion to differentiate whether *=ka* and *=ra* are providing different types of clausal or evidential meaning, which is why it is important to control for tense when conducting the tests in the following chapter.

3.3.1 *=ka and tense*

The morpheme *=ka* may be used in a number of different tenses. We already looked at *=ka* being used in a number of present tense statements such as:

- (73) Mo ro n-omotidio=**ka**
 1SG 2SG 1P-wait=**EVID**
 ‘I am waiting for you.’

The same occurs in narrative as well as elicited speech:

- (74) Nu moto-i umu hiro-hia=**ka**.
 3SG house-DEF dog lots-really=**EVID**
 ‘At his home there are a lot of dogs.’ (narrative ex.4)

Although *=ra* is typically used to mark most past tense occurrences, *=ka* is used for immediate past utterances when something has “just” happened. It appears that it is only through context that one is able to distinguish between present and immediate past utterances to see whether the occurrence is in the process of happening, or whether it has “just” happened. The present and immediate past tenses are morphologically identical. The example below would be said if one were stating that they had *just* caught a fish (perhaps as the fishing line was coming out of the water, or if someone asked what was happening):

- (75) Mo uho n-ohiai=**ka**
 1SG fish 1P-catch=**EVID**
 ‘I (have just) caught a fish.’
- (76) Mo ro nu n-irihati=**ka**
 1SG AG 3SG 1P-hit=**EVID**
 ‘I (have just) hit him/her.’
- (77) Mo ro beredi n-ahiai=**ka**
 1SG AG bread 1P-cut=**EVID**
 ‘I (have just) cut the bread.’

Throughout the narratives =*ka* is used on present and immediate past situations. It appears that in storytelling, much of the story is told in the immediate past tense as though it has just happened – because in the story that is how it occurs:

- (78) Ita bomo gama-i erehe’eai ta umu kekei i-bodoi=**ka**.
 then pig big-DEF turn at dog little PO-follow=**EVID**
 ‘And then the big pig turned around and chased the dogs.’ (narrative ex.16)
- (79) nu davarai i-vodau-i=**ka**
 3SG beach PO-take-DEF=**EVID**
 ‘he [took] them to the beach.’ (narrative ex.8)

The particle =*ka* is also employed in positive future tense clauses. The auxiliaries *o’u* ‘come’ and *a’ai* ‘do’ are used to indicate that the clause is in the future tense, with *a’ai* expressing near future (up until tomorrow), and *o’u* marking distant future (from tomorrow onwards). Although the auxiliaries *a’ai* and *o’u* are in a present tense form, when combined with the bare stem form of a verb they express future tense:

- (80) Rioiti doutu raisi itai **o’u=ka-ido**
 2DL tomorrow rice cook **FUT.come=EVID-DL**
 ‘You both will cook rice tomorrow.’
- (81) Ginau ro na wapea-i ovodau-i **o’u=ka**
 Ginau AG this boat-DEF take-DEF **FUT.come=EVID**
 ‘Ginau will take this boat.’
- (82) Nu motoi ididi **a’ai=ka**
 3SG house build **FUT.do=EVID**
 ‘S/he is going to build a house.’

- (83) Nu omoa ri **a'ai=ka**
 3SG fall for **FUT.do=EVID**
 'S/he is about to fall over.'

=*ka* is also used in near past contexts (from present time up until yesterday), but appears as *vaka*.

Although the verbal prefix *v-* is used to mark second and third person, *va-* does not appear elsewhere on its own in elicited texts, other than forming the near past *vaka*, making it a bound morpheme:

- (84) Mo maketi oito n-odau **vaka**.
 1SG market to 1P-go **NP.EVID**
 'I went to the market (this morning).'

- (85) Mo gimo n-a'ai **vaka**.
 1SG sick 1P-do **NP.EVID**
 'I was sick (earlier).'

Surprisingly however, although *va* by itself has never appeared in elicited data, throughout the narratives *va* is used as *then*, pushing the story along, just as the conjunction *ka* would:

- (86) Iroroma imumuai=ka go'ota ata-i to, bomo gema-i
 Iroroma fly=EVID coconut.tree other-DEF to, pig big-DEF

va ierehe'edio-i ta
then turn-DEF at
 'Iroroma flew onto another coconut tree, then the pig turned' (narrative ex. 23)

- (87) **ka** ata hivio-i nu aro'o umu to'o-i tuiai ta
and some day-DEF 3SG that dog lots-DEF middle at
 'Then one day among all those dogs' (narrative ex.6)

In negative non-future clauses, =*ka* appears as *haka*, as already discussed. However, in negative future contexts, the result is *taho'o aika*, with *aika* becoming *aikaido* and *aikaumo* when agreeing with a dual or plural subject:

- (88) Mo raisi itai **taho'o aika**.
 1SG rice cook **NEG.FUT.EVID**
 'I won't cook rice.'

- (89) Nu toe=ka Ginau ro nu ovabai **taho'o aika**.
 3SG afraid=EVID Ginau AG 3SG help **NEG.FUT.EVID**
 'He's afraid that Ginau won't help him.'

- (90) Nimoiti varupi itai **taho'o aika-ido.**
 1DL potato cook NEG.FUT.EVID-DL
 'We both won't cook kumara.'
- (91) Nimoibi varupi itai **taho'o aika-umo.**
 1TL potato cook NEG.FUT.EVID-PL
 'We three won't cook kumara.'

3.3.2 =ra and tense

As well as being in complementary distribution with =ka in specific morphosyntactic environments, =ra is also in complementary distribution with =ka when used in the verb tense paradigm. =ra is used to mark intermediate past tense (i.e. events that happened yesterday). There is no other tense marking used in intermediate past tense utterances:

- (92) Mo pe ra aibi ra-i to n-odau=**ra**
 1SG canoe and paddle and-DEF to 1P-go=**PAST**
 'I was paddling a canoe.'
- (93) Mo detu reke-i n-ovadidio=**ra.**
 1SG yesterday net-DEF 1P-sew=**PAST**
 'I sewed up the net yesterday.'

=ra also appears in distant past (earlier than yesterday) clauses, though the past tense verbal prefix *p-* also appears:

- (94) Mo obo-i **p-i-n-idio=ra**
 1SG water-DEF **DP-PO-1P-drink=PAST**
 'I drank water.'
- (95) Mo netua bomo-ti **p-i-n-aro=ra**
 1SG two pig-two **DP-PO-1P-shoot=PAST**
 'I shot two pigs.'

In interrogatives, =ra is used to indicate singular present tense, near past tense (up until yesterday), and intermediate past (yesterday):

- (96) Ro hete a-v-a'ai=**ra**
 2SG dance Y/N-2/3P-do=**INT**
 'Are you dancing?'
- (97) Ro ro kava obo-i v-idio=**ra**
 2SG AG kava water-DEF 2/3P-drink=**INT**
 'Did you (just) drink kava?'

- (98) Ro detu hati to-i odau=**ra**
 2SG yesterday where to-DEF go=INT
 ‘Where did you go yesterday?’

Although =*ka* is used for future declarative clauses, =*ra* is employed in singular near future (until tomorrow) and distant future (from tomorrow onwards) interrogatives, where *a'ai* and *o'u* also come into play:

- (99) Ro doutu raisi itai v-o'**u=ra**
 2SG tomorrow rice cook 2/3P-FUT.come=INT
 ‘Will you cook rise tomorrow?’

- (100) Ro ro mo na-nibo-i om-ovaredio-i n-a'**ai=ra** omo-i
 2SG AG 1SG thing-heavy-DEF BEN-carry-DEF 1P-FUT.do=**int** creek-DEF
 hapuo-i to doutu?
 half-DEF to tomorrow
 ‘Will you be carrying my load across the creek for me tomorrow?’

Rather than employing the use of =*ra*, interrogatives with a plural subject use *du-* followed by the subject agreement markers –*do* ‘dual’ and –*mo* ‘plural’ to mark that the clause is an interrogative. This is how all interrogatives with plural subjects are formed, aside from negative future and near past (up until yesterday) interrogatives:

- (101) Rioiti Kuto taitui a-v-i-ho vadio **du-do?**
 2DL Kuto yam Y/N-2/3P-PO-eat HAB INT-DL
 ‘Do you and Kuto eat the yams?’

- (102) Netua umu ro pusi v-obodidio **du-do?**
 two dog AG cat 2/3P-chase INT-DL
 ‘Did two dogs chase the cat?’

- (103) Nimoibi ro Ginau nana-i om-ovaredio-i n-o'u bi
 1TL AG Ginau things-DEF BEN-carry-DEF 1P-FUT.come TL
du-mo doutu?
 INT-PL tomorrow
 ‘Will the three of us take Ginau's things tomorrow?’

As previously discussed, *hara* is found in negative non-future interrogatives, where the bound morpheme *ha* cannot stand alone. *hara* is the interrogative version of the negative non-future declarative type marker *haka*:

- (104) Ro na'u iho vadio-i **hara**
 2SG what eat HAB-DEF **NEG.INT**
 'What don't you eat?'

- (105) Ro wotu eve'a-i **hara**
 2SG who see-DEF **NEG.INT**
 'Who didn't you see?'

Just as the auxiliaries *o'u* and *a'ai* appear alongside *=ra* in future interrogatives, *o'u hara* seems to be the future negative form for interrogatives:

- (106) Ro taitui iho-i v-o'u **hara**
 2SG yam eat-DEF 2/3P-FUT.come **NEG.INT**
 'Won't you eat yams?'

3.4 Interactions between *=ka* and *=ra*

The morphemes *=ka* and *=ra* may appear in the same sentences, but not in the same clauses (this is not to be confused with the conjunction *ra* which shows up in all clause types). This can be seen in the following example where the first clause is actually the subordinate clause and is in the immediate past tense, while the matrix clause is in the present:

- (107) Mo duo-i n-orou=**ra** hivo-i n-iraromo-i=**ka**
 1SG night-DEF 1P-sleep=**PAST** dream-DEF 1P-remember-DEF=**EVID**
 'I remember the dream that I had last night.'

In conditional clauses, *=ra* appears marking the initial conditional clause, while *=ka* marks the separate declarative clause which follows:

- (108) Ro ro merekeke-i v-i-arodio=**ra**, mo ro doutu
 2SG AG children-DEF 2/3P-PO-look.after=**COND** 1SG AG tomorrow
 ni i-arodio-i n-o'u=**ka**.
 3PL PO-look.after-DEF 1P-FUT.come=**EVID**
 'If you look after the kids today, I will look after them tomorrow.'

There are a few occasions in the verbal tense paradigm where neither *=ka* nor *=ra* appear. Neither morpheme is used in positive distant past interrogatives:

- (109) Ioropoio ta ro maketi to a-odau?
 last at AG market to Y/N-go
 'Did you go to the market last week?'

=*ra* also fails to appear in third person intermediate and distant past declaratives or intermediate past interrogatives:

- (110) Nu detu maketi to odau
 3SG yesterday market to go
 ‘He went to the market yesterday.’

- (111) Nu obo-i p-imapeduo inai mere-behe ata-i hio
 3SG water-DEF DP-swim but person-female some-DEF run

 p-odau
 DP-go
 ‘She went swimming but the other girl went running.’

- (112) Nu detu hati to-i odau?
 3SG yesterday where to-DEF go
 ‘Where did he go yesterday?’

3.5 The evidential functions of =*ka*

The particle =*ka* seems to function as a kind of evidential marker. It appears that =*ka* is employed in order to indicate that the addressee does not have any evidence for what the speaker is saying to them. The lack of =*ka* in utterances appears to encode that there is some type of evidence for what is being said on the part of the addressee, contributing to some common ground on the part of both participants. It appears to be that the lack of =*ka* shows that there was some type of indirect evidence that the addressee holds for the utterance that the speaker produced.

In the examples below, we can see the difference between sentences where the addressee has some type of evidence for the occurrence, versus those occasions where the addressee would have had no idea if not for the speaker mentioning the occurrence:

- (113) *Context: You fell but the person you were with did not see you, and once standing again you tell them you fell.*

Mo ai-n-omoa=**ka**.
 1SG CERT-1P-fall=**EVID**
 ‘I (just) fell.’

- (114) *Context: You fell but the person with you did not see you fall but they do see you standing up again. You tell them what happened.*

Mo ai-n-omoa=Ø
 1SG CERT-1P-fall=Ø
 ‘I (just) fell.’

The lack of =*ka* in example (114) cannot mean that the example is in another tense paradigm as there is no tense in which =*ka*/=*ra* do not appear for first person singular for declaratives in the paradigm.

Other examples of =*ka* vs. lack of =*ka* have been found, and all examples express the same =*ka*/no =*ka* distinction in terms of the evidence that the addressee has for what is being said. All of the examples have been controlled for tense in order to provide only examples in which =*ka* would normally be expected to appear, while tenses where =*ka* does not appear were avoided.

In the next examples, the first situation might occur if A saw B talking on the phone and asked 'Who is that?' and B answered 'My Sister', where A had no idea who B is talking to:

- (115) *Context: A sees B speaking on the phone through the window, but can't hear what B is saying. A asks B who she is speaking to.*

A: Wotu ro
 who AG
 'Who is that?'

B: Mo niavapo-i=**ka**
 1SG younger.sibling-DEF=**EVID**
 'It's my sister.'

In comparison, the following example (116) would occur if B was talking on the phone and A heard B speaking Urama, so thought that B was talking to her sister (because that's the only other person that had a phone and who spoke Urama) and A asked "Is that your sister?":

- (116) *Context: A is in the room while B is on the phone speaking to someone in Urama, knowing that B often speaks to her sister, A asks if it is her.*

A: Ro niavapo-i=*ra*
 2SG younger.sibling-DEF=INT
 'Is that your sister?'

B: Mo niavapo-i=**Ø**
 1SG younger.sibling-DEF=**Ø**
 'It's my sister.'

In the following example, the two participants are together inside and neither of them can see the dog:

- (117) *Context: There is a dog barking loudly outside and I asked if you can hear the dog:*

Nama n-orovidio=Ø
 now 1P-hear=Ø
 ‘I can hear it.’

Or

Mo ro umu-i nama n-orovidio=Ø
 1SG AG dog-DEF now 1P-hear=Ø
 ‘I can hear the dog.’

Here is another example of this =ka/lack of =ka distinction:

- (118) *Context: You are behind me and see that I am doing something, but you can’t tell what it is, so you ask what I’m doing. I would answer:*

Mo du-i n-iho=Ø
 1SG food-DEF 1P-eat=Ø
 ‘I am eating’

On the other hand,

- (119) *Context: You call me and ask what I am up to, and I answer:*

Mo du-i n-iho=**ka**.
 1SG food-DEF 1P-eat=**EVID**
 ‘I am eating.’

3.6 Summary

This chapter provided an overview of the morphosyntactic distribution of the morphemes =ka and =ra. It claimed that while both morphemes mark different tenses in the verbal tense paradigm, they are also used to mark different clause types as well. It has been noted that =ka marks declarative-type sentences, but it also expresses evidential functions. The evidential functions of =ka involve evidence relating to the addressee for what the speaker is uttering. In order to express evidence for the addressee, the speaker needs to have knowledge of whether or not the addressee has evidence for their statement; there needs to be knowledge of a common ground between the participants. The morpheme =ra is used to mark conditional clauses, interrogatives, and some imperative statements.

4. Applying diagnostics to =ka

In order to determine the meaning of =ka, a number of tests need to be conducted so as to decide whether =ka is in fact a type of modal/evidential, and also whether it has evidential functions. The tests that are conducted should help to determine whether the evidential marker =ka is operating at a propositional or an illocutionary level, and in turn should be able to tell us whether =ka is an epistemic modal evidential, or whether =ka is a non-modal evidential. The first three tests deal with the truth conditions of sentences in order to determine whether or not =ka is a modal or non-modal evidential, while the final one relates to scope and embeddability. The tests aim to determine whether =ka is functioning at the propositional or illocutionary level of meaning, and in turn whether =ka is a modal or a non-modal evidential. In utilizing these tests, this study endeavours to decipher the meaning(s) of =ka, and to provide a distinction between propositional and illocutionary evidentials.

Propositional acts are typically viewed as acts of offering or of suggesting something to be considered. Propositional operators are utterances which assert propositional content: they make statements about the world, and establish truth or falsity. When one is referring or predicating in an utterance, they are performing propositional acts (Searle, 1969). Propositional operators take propositions as their arguments. English propositional attitude verbs are those such as *think* or *believe*. These are often termed “bridge” verbs (Vickner, 1995) as they are verbs which allow *that* to be omitted before the complement clause. For example, one can say either of the examples in (120):

- (120) She thinks she saw a cat.
She thinks that she saw a cat.

While with the non-bridge verb “shout”, it sounds odd to omit *that*:

- (121) ?She shouted she saw a cat.
She shouted that she saw a cat.

In Urama, sentences containing verbs such as *umuo* ‘know’ employ the use of two separate clauses, the first clause contains the main verb *umuo*, and the subordinate clause contains the rest of the sentence:

- (122) Nu **umuo**=ka ro ro orioi eidai a'ai=ka.
3SG **know**=EVID 2SG AG game take FUT.do=EVID
'He knows that you will win the game.'

Illocutionary speech acts are those which produce utterances such as suggesting, warning, or requesting. Huang (2012) describes an illocutionary verb as being “a type of content-descriptive speech act verb that names the illocutionary act it performs” (p. 148), while Searle (1976) explains that “most illocutionary verbs have performative uses” (p. 6). These could be verbs such as *announce*, *suggest*, or *promise*. Illocutionary operators are used to express an illocutionary act which is “the type of action he or she intends to accomplish in the course of producing an utterance” (Huang, 2012, p. 147). These actions may also be labelled *illocutionary force* or the *illocutionary point* of a particular act of speech. Illocutionary force is the effect a speech act is designed to give.

Faller (2002) relates these levels of meaning (propositional and illocutionary) to correspond to the distinction between modal and non-modal evidentials, where modal evidentials are propositional, and non-modal evidentials are illocutionary. The following tests can help us to determine whether the evidential *=ka* operates “on a *propositional level* (i.e. it contributes to the truth conditions of a proposition), or an *illocutionary level* (i.e. it does not contribute to the truth conditions of a proposition [but instead operates at the sentence level])” (Peterson, 2010, p. 16). Propositions are the part of a clause which remains constant regardless of changes to illocutionary force. The truth condition of a clause relates to whether it is able to be considered true or false, an entity standing alone is unable to be true or false. For example:

(123) The dogs.

One cannot say that ‘the dogs’ is true or false because it is simply an entity. However, the predicate *run* is able to take this entity and return a truth value:

(124) The dogs run.

We now have a proposition which can be considered as true or false. While propositions are able to alter these truth conditions, illocutionary arguments cannot.

Non-modal evidentials operate at the sentential level rather than the propositional level because they take propositions as part of their argument, and therefore require a different semantic/theoretical approach than modal evidentials. The static semantic analysis of evidentials relates to modal evidentiality. This static semantic analysis is used if the tests determine that *=ka* is an epistemic modal working at the propositional level of meaning rather than the illocutionary level of meaning. On the other hand, non-modal evidentiality is based on illocutionary evidentials. When it is known whether the evidential functions at a propositional level or on an illocutionary level, we can proceed

to determine which type of formal analysis may be used in order to test predictions about the semantics of the evidential $=ka$.

The results from the following tests are used to determine whether $=ka$ is functioning at the propositional or illocutionary level of meaning. The tests will also be used to provide a kind of profile for $=ka$, showing whether $=ka$ is a modal evidential, a non-modal evidential (epistemic modal), or the tests may determine that $=ka$ carries aspects of both propositional and illocutionary force. If the results are mixed, then they challenge either the validity of the tests being used, the assumptions made about $=ka$, or it could challenge the idea that evidentials and modals have to fit into either one or the other category.

In order to carry out the tests effectively, the tense paradigms need to be controlled for $=ka$ in order to decipher whether or not the test results are due to $=ka$, or a confounding factor. Only examples in which tenses where $=ka$ would normally appear (cf. Appendix A) are used in these tests. This is due to the fact that simply because $=ka$ is not there, does not imply in Urama that it is supposed to be there, unless of course the tense paradigm indicates it should be.

4.1 Known Truth/Falsity test

The first test to be employed is the known truth/falsity test. This test is a diagnostic for whether a sentence is felicitous if the prejacent (the antecedent proposition) is known to be either true or false. The results of this test should show that the evidential is not able to be a modal if the appearance of the evidential to the sentence is felicitous even when the speaker knows that the prejacent is true or false (Peterson, 2010). In other words, if the sentence is licit (semantically/syntactically), even when the speaker knows that the proposition is not true, the evidential cannot be a modal because modal evidentials contribute to the proposition expressed, while non-modal evidentials do not. The known truth/falsity test should show that if $=ka$ appears in a sentence, and the clause is licit, even though the speaker knows that the prejacent proposition including $=ka$ is false, then $=ka$ would be a non-modal evidential rather than a modal evidential.

In an illocutionary analysis of evidentials, it is possible for the evidential to be used even when the proposition is known to be false by the speaker, because the evidential itself would not be contributing to the propositional content. Faller (2002) illustrates how the Quechua reportative morpheme $-si$ can be used even when the speaker knows the prejacent is false. For example:

- (125) Pay-kuna-s ñoqa-man-qa qulqi-ta muntu-ntin-pi saqiy-wa-n, mana-má
 (s)he-PL-**si** I-illa-TOP money-ACC lot-INCL-LOC leave-1O-3 not-SURP
- riki riku-sqa-yki ni un sol-ta centavo-ta-pis
 right see-PP-2 not one sol-ACC cent-ACC-ADD
- saqi-sha-wa-n-chu
 leave-PROG-1O-3-NEG
 ‘They left me a lot of money, but, as you have seen, they didn’t leave one *sol*, not one cent.’
 EV: It is said/They said that they left me a lot of money (Faller, 2002, p. 191).

The above example (125) employs the use of the reportative *–si* even when the speaker knows that the prejacent proposition (*They left me a lot of money*) is not true. So even though the reportative provides evidence of the speaker having heard they were left some money, the speaker knows this proposition is not true.

An epistemic modal analysis of evidentials predicts that an evidential is infelicitous when the prejacent proposition is known by the speaker to be false. Faller (2002) states that in contrast to the Quechua *–si* reportative being non-modal, “a speaker using English epistemic *may* or *must* cannot know for a fact that the embedded proposition is not true” (p. 193).

- (126) *It may be raining, but it is not (raining)
 *It must be raining, but it is not (raining) (Faller, 2002, p. 193).

In English these sentences with *may* and *must* do not make sense, so the epistemic modal *may* is unable to be used felicitously when the proposition *it’s not raining* is used. This is because both *may* and *must* indicate a degree of certainty towards the statement in which they occur. In comparison to these epistemic modals is example (127):

- (127) I heard it was raining, but it is not (raining).
 I thought it was raining, but apparently it is not (raining).

The above examples use the English equivalent of evidentials, where *heard* and *thought* express some type of evidence.

In applying this test to the data from Urama, the outcome of the test should show that if *=ka* is used in the sentence (showing some type of evidence for the occurrence) even when the speaker knows that the prejacent proposition is false, then *=ka* is not a modal, but rather a non-modal evidential. In order to develop an elicitation plan for this test, a range of example sentences were constructed, each

with a discourse context. The language consultant was then asked whether the sentences were true, and whether they were felicitous (appropriate for their clause type). If the sentences are felicitous with the addition of *=ka*, even when the prejacent is false, then *=ka* is likely not a modal. Direct elicitation also took place where a translation was asked for, followed by asking for judgments.

The following examples show that *=ka* is able to be used if the prejacent proposition is known to be false. This is based on either some kind of prior relevant knowledge, or experience:

- (128) *Context: You tripped, but didn't fall over, but then you actually fell over straight afterwards:*

Mo	omoa-i	haka,	inai	mo	ai-n-omoa= ka .
1SG	fall-DEF	NEG.EVID,	but	1SG	CERT-1P-fall= EVID

‘I didn’t fall over, but I did fall over.’

In example (128) above, we can see that the evidential marker *=ka* is employed, even when the prejacent *Mo omoai haka* is known to be false. Just as in the Quechua example (125), even though the evidential is employed, the speaker knows that the prejacent proposition is not true, illustrating that *=ka* is an illocutionary operator, just as the morpheme *–si* is, in Quechua. The following examples support this:

- (129) *Context: It isn't really raining hard, but it is a little.*

Viha-i	a'o-i	haka,	inai	viha	ro	a'o= ka
rain-DEF	say-DEF	NEG.EVID,	but	rain	AG	say= EVID

‘It isn’t raining, but it is raining.’

Or:

Viha-i	a'o-i	haka,	inai	mo	ro	ai-n-iraromo= ka
rain-DEF	say-DEF	NEG.EVID	but	1SG	AG	CERT-1P-think= EVID

viha	ro	a'o= ka
rain	AG	say= EVID

‘It isn’t raining, but I think it is raining.’

The use of *=ka* in this example following *mo ro ainiraromo* is licit but is not obligatory. The sentence is licit with or without *=ka*. As discussed above, bridge verbs such as *iraromo* ‘think’ incur different sentence structures than other verbs. In this case, *=ka* may appear as part of the prejacent clause (*mo ro ainiraromo ka*) or *=ka* may be left out (*mo ro ainiraromo*). In both situations the clause is licit. However, *=ka* refers solely to the verb *ainiraromo*, and not to the proposition that *it is raining*. This *=ka* is not obligatory, which is a pattern seen amongst bridge verbs in Urama.

In example (130), we can see that the negative form *haka* is used when the prejacent proposition is known to be true. However, examples like this do not mean anything for this test as one is unable to have a negative without *haka*. *haka* is used whether or not the affirmative version of the statement contains =*ka*:

- (130) *Context: Someone told you that Kuto was not at school but you know that he is there because you just dropped him off at school.*

Kuto	sikuru	vati	ta= ka	inai	nu	sikuru	vati	ta-i	haka
Kuto	school	place	at= EVID	but	3SG	school	place	at-DEF	NEG.EVID

‘Kuto is at school, but he isn’t at school.’

In the following examples, we can see situations where =*ka* does not surface due to addressee-held evidence for what the speaker is saying:

- (131) *Context: I am walking behind someone and you ask me if I am following her, but I just happen to be going in the same direction.*

Mo	nu	obodo-i	haka	inai	Mo	nu	n-obodo= Ø
1SG	3SG	follow-DEF	NEG.EVID	but	1SG	3SG	1P-follow= Ø

‘I’m not (really) following her, but I’m following her.’

Although the above example does not employ the evidential =*ka* clause-finally, it is still relevant to this test as it shows that the lack of =*ka* is able to be used even when the prejacent is known to be false. In other words, it is not the case that =*ka* is showing up because it has to (for morphosyntactic reasons).

- (132) *Context: I am mouthing to music but not singing out loud. You see my lips moving but can’t hear anything because you are wearing headphones, and you ask me if I’m singing.*

Mo	nahua	abodo-i	haka	inai	Mo	nahua	n-abodo= Ø
1SG	song	sing-DEF	NEG.EVID	but	1SG	song	1P-sing= Ø

‘I’m not (really) singing, but I am singing.’

The two examples (131) and (132) above, show that the =**Ø** expresses a non-modal function, which lines up with the outcome of this test.

This =*ka*/lack of =*ka* distinction with the addressee evidence may only work in the first and second person because as we can see in the verbal tense paradigm, a lack of =*ka* in third person expresses intermediate past (yesterday):

- (133) *Context: A football player didn't kick a goal the entire game, but then he kicked a goal at the last minute.*

Nu	golu	gau	amohodidio-i	haka	inai	nu	golu	gau
3SG	goal	one	kick-DEF	NEG.EVID	but	3SG	goal	one

amohodidio

kick

'He didn't kick a goal, but he kicked a goal (yesterday).'

From these examples, we are shown that *=ka* may be used *even* when the speaker knows that the initial proposition is false. This means that according to the objective of the test, *=ka* is unable to be analysed as a modal evidential. If the test showed that *=ka* was unable to be employed when the speaker knows the prejacent was false, then *=ka* would be contributing to the proposition because it would then be contributing to the truth conditions of the utterance. The negative marker *haka* may be used whether *=ka* would normally be used or not in the affirmative. This makes it difficult to decipher whether the clause-final particle *=ka* would have been employed in a particular situation. *=Ø* may also be used when the speaker knows that the prejacent is false. This indicates that both *=ka* and *=Ø* are operating at the illocutionary level according to this test, and are therefore functioning as non-modal evidentials.

4.2 Assent/Dissent test

The second test used to analyse whether *=ka* is modal or non-modal, is the Assent/Dissent test. This is also a test which involves the truth value of a sentence. The Assent/Dissent test determines whether the addition of the evidential to an utterance can be agreed or disagreed with. The outcome of this test claims that "one cannot disagree with the content contributed by an illocutionary operator because a speech act does not have a truth value" (Peterson, 2010, p. 115). If this test concludes that the content given by an illocutionary operator is unable to be disagreed with, then it would be classed as a speech act operator, and speech acts do not express truth values. If a meaning based at the illocutionary level is not truth conditional, it is unable to be targeted for assent or dissent. For example, one cannot agree or disagree with an imperative such as 'Shut the door!' because it does not contain a truth condition, so one cannot answer the imperative with 'No, that's not true!'. Therefore in terms of this test, if the contribution of *=ka* is able to be agreed or disagreed with, then it is not an illocutionary operator, but rather, is a modal.

The assent/dissent test challenges the original proposition of the phrase just as with the known truth/falsity test. However, while the known truth/falsity test looked at whether *=ka* could be used felicitously even though the proposition was true or false, this test asks whether the addition of *=ka* to

a clause may be agreed or disagreed with. This test is essentially a complement to the truth/falsity test. They accomplish the same thing, but do so in slightly different ways. The assent/dissent test works under the assumption that there are always ways to challenge the level of meaning, whether this is presupposition, or sincerity conditions (Peterson, 2010). The known truth or falsity test is used to determine whether $=ka$ is able to be used depending on what is known about the prejacent proposition.

This test requires the assent or dissent of the clause to take on the form “That is (not) true”, in which ever way this notion is expressed in the language concerned. This challenge of the proposition helps to ensure that the test distinguishes between the presuppositional material, and other material which contributes to the truth conditions of the utterance. The presuppositional material is that which is taken for granted. For example, in (134):

(134) Tim no longer runs marathons.

The presuppositional material in the above example is that Tim once ran marathons. The assent/dissent test uses “That is (not) true” in order to distinguish between the presupposition that *Tim once ran marathons*, and the evidential material contributing to the truth conditions of the sentence, which express that Tim *no longer* runs the marathons.

“Assuming that meaning which is at the illocutionary level is not truth conditional, we expect that it cannot be targeted for assent or dissent” (Peterson, 2010, p. 114). So if $=ka$ is operating at the illocutionary level, and therefore carries a truth value, it should not be able to be agreed or disagreed with, for instance. In English, illocutionary adverbs cannot be disagreed with:

(135) A: Jo must be the thief.
B: That’s not true. There are some other plausible suspects. Jo may be entirely innocent.

B does not deny the proposition that Jo is the thief, but instead is denying the modal claim that Jo *must* be the thief (Matthewson et al., 2007, p. 32⁷. Adapted from an example in Faller, 2002, p. 113). This example shows that because the proposition is unable to be denied, and therefore the truth conditions of the proposition are unable to be tampered with, *must* is an illocutionary operator.

⁷ Page numbers for Matthewson et al. (2007) refer to the preprint manuscript version, and not the published version.

Matthewson et al. (2007), present evidence that evidentials in St'át'imcets allow dissent of a modal claim using the “That is (not) true” equivalent. The addressee is able to challenge the modal used, rather than denying the actual proposition. In the following example from Matthewson et al. (2007), “B denies that A has the correct information about John’s whereabouts in the worlds in which his lights are on” (p. 34). Crucially, B is not denying the embedded proposition, but denies that A gave correct information:

(136) *Context: A is driving past John’s house with B and sees John’s lights are on.*

- A: wá7 k’a l-ta tsitcw-s-a s-John tákem i
 be INFER in-det house-3POSS-EXIS NOM-John all DET.PL
- sts’ák’w-s-a wa7 s-gwel
 light-3POSS-EXIS IMPF STAT-burn
 ‘John must be at home; all his lights are on.’
- B: aoz kw-a-s wenácw; papt wa7 lháp-en-as
 NEG DET-IMPF-3POSS true always IMPF forget-DIR-3ERG
- kw-a-s lháp-an’-as i sts’ák’w-s-a
 DET-IMPF-3POSS put.out-DIR-3ERG DET.PL light-3POSS-EXIS
- lh-as úts’qa7
 when-3CONJgo.out
 “That’s not true. He always forgets to turn his lights off when he goes out.”
- B’s statement ≠ “John is not home.”
 B’s statement = “It is not true that John must be home.” (p. 34).

In order to effectively use this test, only tenses where =ka is expected to appear are used, namely the present, near future and distant future tenses. The assent/dissent test does not work for imperatives or interrogatives (which is where we would normally find =ra). For example, one cannot agree or disagree with an imperative:

- (137) A: Go close the door!
 B: *That’s not true!

As with imperatives, one is also unable to agree or disagree with an interrogative:

- (138) A: Will you come tonight?
 B: *That’s not true!

Just as in English, in Urama one is unable to disagree with an imperative statement. Imperatives carry illocutionary force (Condoravdi & Lauer, 2012) and illocutionary utterances are unable to be agreed

or disagreed with. If =*ka* is operating at the illocutionary level of meaning it would also be unable to be subjected to assent or dissent.

- (139) A: Odau biri urai!
 Go door close
 'Go close the door!'
- B: *Oroha-i haka.
 right-DEF NEG.EVID
 'That's not true'

In the following examples, the assent/dissent test is applied to declarative clauses. The examples show that it is the proposition which can be disagreed or agreed with, rather than the evidential =*ka*. This means that they do not allow dissent of =*ka*.

- (140) *Context: It is February and person A is from the Northern Hemisphere where it is normally cold in February, but person B is from New Zealand where February is the hottest time of year.*

- A: Na hivio-i guobo ro ap-o'a=**ka**
 here time-DEF cold AG ASSUM-stay=**EVID**
 'This time is cold.'
- B: Ro hobou a'o=*ka*. na hivio-i nu tuniha hivio-i
 2SG lie say=EVID, this time-DEF 3SG all time-DEF
 meaha o'a vadio=*ka*
 good stay hab=EVID
 'You are lying. Around this time it is always nice.'

B = It isn't cold.

The example A above, may be dissented by B even though the evidential =*ka* was used stating that A had evidence for it being cold. While =*ka* appears in A, B is disagreeing with the proposition that *it is cold*, rather than the fact that the speaker employed the evidential =*ka*. The above example also shows =*ka* appearing in the response given by B. This is because B has his own evidence for disagreeing with A.

- (141) *Context: John was seen leaving the scene of a theft. But there were also other people there.*

A: John=**ka** piro-mere-i
 John=**EVID** steal-person-DEF
 ‘John is the thief.’⁸

B: Ro hobou a’o=**ka** John haka piro-mere.
 2SG lie say=**EVID** John NEG.**EVID** steal-person
 ‘You’re lying/assuming, John isn’t the thief.’

B = not true that John is definitely the thief

B = John wouldn’t do such a thing – you know John

In this example (141), B is disagreeing with the claim that *John is the thief*. B knows that because there were others near the scene of the crime who could also be potential thieves, that it is more likely that John is innocent. However, because John was present there is a chance he could also be the thief. B is expressing dissent of the proposition that *John is the thief* rather than the addition of =*ka* and the idea that he *must* be the thief.

- (142) *Context: A just came from the kitchen where they saw Kuto was cooking. B asks what was happening in the kitchen.*

A: Kuto du-i itai=**ka**.
 Kuto food-DEF cook=**EVID**
 ‘Kuto is cooking.’

B: Ire oroha-i haka
 that right-DEF NEG.**EVID**
 ‘That’s not true!’

B = Kuto is not cooking (because he does not cook)

B ≠ You do not know that.

In opposition to this, = \emptyset is employed in the following context:

- (143) *Context: Kuto normally comes home before A. A walks into the house and smells something coming from the kitchen.*

A: Kuto du-i itai= \emptyset
 Kuto food-DEF cook= \emptyset
 ‘Kuto is cooking.’

⁸ Although =*ka* is not clause-final here, the example is still able to be used for this test as it still specifies a lack of evidence for the speaker. If the sentence were written canonically, as in *John piromere ka*, this would mean ‘John is a thief’, rather than ‘John is the thief’.

B: Ire oroha-i haka
 that right-DEF NEG.EVID
 ‘That’s not true!’

B = You can’t be sure of that, you haven’t seen him, someone else could be home.

B ≠ Kuto is not cooking.

These two examples where one contains =*ka* and the other does not, provide us with a clear demonstration of the evidential properties of =*ka*. While in example (142), it is the proposition (*Kuto is cooking*) that is dissented, example (143) shows = \emptyset being disagreed with, rather than the proposition. It can be concluded therefore, that =*ka* is operating at the illocutionary level, while = \emptyset is functioning at the propositional level of meaning. This is important evidence that = \emptyset is *not* a zero morpheme, but is just a lack of =*ka*. If =*ka* and = \emptyset were allomorphs then it might be expected that they behave in the same way semantically. Therefore = \emptyset is *not* an allomorph.

(144) *Context: It was raining at university and so A claims it must be raining at home as well because it’s in the same city.*

A: nahini viha ro a’o ato motoi ne’ei viha ro ap-a’o=**ka**.
 here rain AG say if house at rain AG ASSUM-say=EVID
 ‘If it is raining here, it is raining at home.’

B: Ire oroha-i haka nahini viha ro ato motoi viha
 that true-DEF NEG.EVID here rain AG if house rain
 a’o-i taho’o aike.
 say-DEF NEG.FUT.EVID
 ‘That’s not true, it doesn’t always work that way.’

B = It is not true that it is definitely raining at home if it is raining here.

In example (144), B is disagreeing with the conditional statement that if it is raining in one place, it *must* be raining somewhere else. So B is dissenting to the conditional proposition, rather than the use of the evidential =*ka* in the second clause. There is no =*ka* in the first clause as it is a conditional clause and =*ka* is unable to appear on conditional clauses. There is also no =*ra* as conditional clauses may take either =*ra* or *ato* ‘if’, or both, as *rato*. There is no difference in meaning as to which one may be used.

We looked at a number of examples in which the appearance of =*ka* is not available for assent or dissent, but rather the proposition is agreed or disagreed with. In the examples below, we are able to examine cases with a =*ka*/= \emptyset distinction. Interestingly, the lack of =*ka* (= \emptyset) is available for assent

or dissent. This provides us with important evidence that =*ka* may express multiple levels of meaning, illocutionary meaning when =*ka* appears on clauses, and propositional when it *does not* appear when expected.

- (145) *Context: B sees someone walk past, and a moment later A walks past going in the same direction. B says that the woman just walked past.*

A: Mo nu n-obodo=**Ø**
 1SG 3SG 1P-follow=**Ø**
 ‘I am following her.’

B: Ire oro-ha-i haka!
 that right-DEF NEG.EVID
 ‘That’s not true!’

B ≠ you aren’t following the woman
 B = I don’t think you are actually following her, just going in the same direction.

B may only disagree with A in example (145) if B does not actually believe that A is following the woman. In this example B is expressing dissent of the lack of =*ka*, meaning that B does not agree that he has evidence for A actually following the woman. In this context A is likely just going in the same direction. In comparison, in example (146) which includes =*ka*, B is disagreeing with the proposition *I am following her*.

- (146) *Context: A walks past B and asks if A saw Sarah because she just went past. A mentions that yes, she is following her, but B knows that Sarah was walking in a different direction to A.*

A: Mo nu n-obodo=**ka**
 1SG 3SG 1P-follow=**EVID**
 ‘I am following her.’

B: Ire oro-ha-i haka!
 that right-DEF NEG.EVID
 ‘That’s not true!’

B = not true that you are following her

In comparison to the example (145), example (146) shows that the proposition *I am following her* is being dissented, rather than =*ka*. We know this from the context. The addressee knows that the proposition is untrue based on their own evidence. In this case, A did not know the direction that the other woman went in, so guessed. B, knowing that it is untrue that A is following the woman, dissents to the proposition. The appearance of =*ka* used by the speaker means that the speaker assumes that

the addressee has no idea what really happened. This dissent of the proposition means that $=ka$ is operating at the illocutionary rather than the propositional level of meaning, and therefore functioning as a non-modal evidential. The same difference can be seen in the example below:

(147) *Context: B calls A to ask whether A is coming yet, A can see B standing at the window.*

- A: Mo ai-n-o'u= \emptyset
 1SG CERT-1P-come= \emptyset
 'I am coming.'
- B: Ire oro-ha-i haka
 that right-DEF NEG.EVID
 'That's not true.'

B = I don't know that you are coming.
 B \neq You are not coming.

In example (147), A claims that she is coming, and includes $=\emptyset$, meaning that B should know because B is at the window. B however, does not see A and claims that it is not true that she is on her way because he cannot see her, as the addition of $=\emptyset$ claims. In comparison to this, we have (148):

(148) *Context: A tells B that A is coming to the party. B knows that A cannot come because A has something else on.*

- A: Mo ai-n-o'u=**ka**
 1SG CERT-1P-come=**EVID**
 'I am coming.'
- B: Ire oro-ha-i haka
 that right-DEF NEG.EVID
 'That's not true.'

B = You are not coming.

Based on the results from the Assent/Dissent test, the use of $=ka$ in Urama may not be targeted for assent or dissent. However, when $=ka$ does not appear where it would be expected to, but when the $=\emptyset$ morpheme appears in its place, $=\emptyset$ may be dissented or assented rather than the proposition. The evidence from the outcome of this test means that $=ka$ is operating at the illocutionary level of meaning, and is therefore a non-modal evidential. On the other hand, $=\emptyset$ is able to be targeted for assent and dissent, which means that $=\emptyset$ is propositional, and a modal evidential.

4.3 Cancellability of Evidence Type Requirement test

Another test that is discussed in the literature and which has been proposed as an illocutionary/propositional diagnostic, is the Cancellability of Evidence Type Requirement test. However, this test is not used in this study. The purpose of the test is to determine whether the evidence type requirement can be cancelled. The evidence type that an evidential contains refers to the source of the information for a statement. The evidence source shows whether the evidence was obtained directly or indirectly, whether the information was obtained through a sensory act such as seeing or hearing, or whether the information was told to the speaker by someone else. The evidential in this situation is required to be used only in specific contexts. For instance, Aikhenvald (2004) provides an example (taken from Floyd, 1999, p. 61), where we can see the direct evidential particle – *mi* from Wanka Quechua refers to what one has ‘seen’:

- (149) ñawi-i-wan-**mi** lika-la-a
 eye-1P-with-**DIR.EV** see-PAST-1P
 ‘I saw [them] with my own eyes’

The visual direct evidential used in the above example may only be used if the speaker definitely saw what happened. So this test determines whether one can cancel the type of evidence being expressed by the evidential.

The literature states however, that this test is not useful as a means of distinguishing between whether an evidential is modal or non-modal, because both analyses produce the same results. Izvorski (1997) explains that in a modal analysis of this test, the evidence type requirement is a presupposition and therefore cannot be cancelled, and Faller (2002) shows that in a speech act operator analysis, the evidence type requirement is a sincerity condition, so also cannot be cancelled. Therefore both of these analyses predict the same results. This test can not work for Urama as the evidential =*ka* does not indicate a specific evidence ‘type’ such as visual or heard.

4.4 Embeddability test

The Embeddability test may also be used in order to determine the modal or non-modal status of the evidential in question. It looks at whether the evidential can be understood as part of the propositional content of an embedded clause, making use of indirect, rather than direct speech (Peterson, 2010). Basically, an illocutionary operator cannot be understood as part of the propositional content of an embedded clause, but a modal can. Like the other tests, the Embeddability test should determine whether =*ka* is functioning at the propositional or illocutionary level of meaning, and in turn whether the evidential is modal or non-modal. It is used to help determine what it is that the evidential (in this

case =*ka*) scopes over, whether it takes scope over the speaker of the utterance, or over the subject of the matrix clause. If =*ka* scopes over the speaker of the utterance, then it is an illocutionary argument and therefore an evidential. On the other hand, if =*ka* scopes over the subject of the matrix clause, then it is propositional and carries epistemic modal values. The main idea behind the Embeddability test is that if the evidential is semantically embedded into the prejacent, it must be contributing to the propositional content of the phrase and is therefore not acting as an illocutionary operator.

While the other tests were utilised in order to determine the status of evidentials through the use of tests relating to truth conditions, this test is instead designed to help determine what it is that the evidential may take scope over, and relating the results back to how this relates to propositional and illocutionary levels of meaning. With an embedded clause we are given the opportunity to figure out whether the evidential in question quantifies over the speaker of the utterance, or over the subject of the matrix clause. Embedded clauses/contexts are necessary to determine what exactly =*ka* quantifies over, because in matrix clauses it is only the speaker (as first person) that the evidential can take scope over, because they are uttering the proposition. In contrast to this, embedded clauses are ambiguous, as there is more than one potential participant – the speaker, and the subject of the matrix clause.

Observe the following schematic example:

(150) John ate the sandwich=EVID

In the above example, the only possible interpretation is that the evidence source that has been expressed is that of the speaker. It cannot be evidence relating to the subject of the clause ‘John’, as John is the one who is doing the eating. Embedded contexts provide an ambiguity, and allow for different interpretations to be possible. In embedded contexts it is not only the speaker who is able to be scoped over by the evidential, but in these situations, the subject of the matrix clause may also be the focus of the evidential in question.

(151) [Mary said [John ate the sandwich]]=EVID

In example (151), it is ambiguous as to whether Mary has some evidence for saying that John ate the sandwich (i.e. she saw him do it, or was told that John ate the sandwich), or whether it is the speaker of the utterance who has some type of evidence for uttering ‘Mary said John ate the sandwich’ (the

speaker overheard Mary talking to her friend. The other option could be that Mary herself told the speaker that ‘John ate lunch’, and now the ‘speaker’ is repeating this to someone else).

Garrett (2001) explores evidentiality and assertion in Tibetan. Garrett provides an examination of three major evidential categories of Standard Tibetan, giving a modal analysis of evidentials in natural language. His dissertation contains an analysis in which some elements of language may provide both evidential and modal function at the same time. He claims that there are evidentials that are also epistemic modals, though which contain some additional restriction about the source of evidence. In Tibetan, there are occasions where an evidential is unable to be employed due to different factors involved in the clause. Here we can see an example where the ‘ego’ (“argued to be a morphologically zero, default, ‘elsewhere’ case, which indicates either immediate or groundless knowledge” (Garrett, 2001, p. xi)) construction is unable to appear when the subject is not in the first person:

(152) nga/%khyed.rang/%kho dge.rgan **yin**
 I/%you/%he teacher [EGO COP]
 ‘I’m a teacher.’

(153) khyed.rang/kho dge.rgan **red**
 you/he teacher [IND COP]
 ‘You are/he is a teacher.’ (Garrett, 2001, p. 208)

In embedded speech contexts, the ‘ego’ morpheme refers to the subject of the matrix clause rather than the speaker of the utterance:

(154) Bkra.shis kho dge.rgan **yin** lab-gi-‘dug
 Tashi he teacher [EGO COP] say-[DIR IMP]
 ‘Tashi says he is a teacher.’

(155) Bkra.shis kho dge.rgan **red** lab-gi-‘dug
 Tashi he teacher [IND COP] say-[DIR IMP]
 ‘Tashi says he is a teacher.’ (Garrett, 2001, p. 209)

This test is being employed because in order to discover the function and meaning of =*ka*, we need to test for whether the embedded =*ka* scopes over the subject of the matrix, or over the speaker. In order for this test to work, evidential contexts must be used, such as those which are sensory, inferential, or direct.

When dealing with a visual evidential, one might come across a sentence such as:

(156) [Mary knows that [John ate lunch]]=EVID

What we are then trying to figure out is whether =*ka*, or an equivalent evidential that marks say, visual evidence, is referring to evidence for Mary (the subject of the matrix clause) who SAW *John eat lunch*, or whether it was the speaker who has visual evidence (perhaps the speaker saw Mary go into a restaurant with John, then come out with him after an hour, or saw Mary talking to her friends about how John was eating his lunch). The question here is whether =*ka* is indicating evidence on behalf of the speaker, or for the subject of the matrix clause.

In order to be able to determine exactly what is going on in this test, we need to decide what it is that embedding entails. Firstly, we need to distinguish between semantic embedding and syntactic embedding. An expression may be described as syntactically embedded if it occurs in a subordinate clause. An example of syntactic embedding can be seen below:

(157) [Kara thinks [John saw the man]]

In this example, the subordinate clause *John saw the man* is embedded in the matrix clause *Kara thinks*. If we placed a syntactically embedded evidential in this sentence, it might look schematically like this:

(158) [Kara thinks [John saw the man]]=EVID]

In this hypothetical situation, the evidential scopes over the speaker of the clause, who has evidence for Kara thinking this (perhaps Kara told the speaker that she thought she saw John seeing the man), rather than scoping over Kara (the subject of the matrix clause).

On the other hand, semantic embedding occurs when the expression is interpreted in the scope of a different operator. We can use English *might* as an example of semantic embedding, where *might* indicates that it is the subject of the matrix clause who is making the inference, and not the speaker:

(159) John said that he might've won = [John said ["I might've won"]]
(Peterson, 2010, p. 120).

Peterson (2010) provides an example of the difference between syntactic and semantic embedding:

(160) A: If the dog barks, the postman might run away.
B: The dog might bark. The postman might run away (p. 119).

In (160), A involves both syntactic and semantic embedding, and although B contains mostly the same message, “the embedded interpretation is provided by the discourse understanding – the semantics and pragmatics – and not the syntax” (Peterson, 2010, p. 119).

In Urama, each clause of a sentence is fully written out as separate clauses sitting next to each other with the appropriate clause-type marker. At present there is no definitive evidence for subordination in Urama, making it safest to test for semantic embedding rather than syntactic embedding in regards to this test. As Peterson (2010) explains, syntactic embedding does not necessarily involve semantic embedding just as semantic embedding does not entail syntactic embedding (such as with conditionals). In order to run this test, it is not necessary to have syntactic embedding, but we *do* need semantically embedded clauses.

This test relates to the propositional/illocutionary question in this way: if the embedded *=ka* refers to the subject of the matrix clause, it would be propositional (modifying the content of the proposition), while if it scopes over the speaker, it would be illocutionary (modifying something beyond the simple content of the proposition - things related to the speaker). Obviously in a situation where the subject of the matrix clause is first person, this does not provide evidence of *=ka* scoping over the subject of the matrix sentence rather than the ‘speaker’ because in this situation the ‘speaker’ and the ‘subject’ are one and the same, so it would be impossible to tell.

In predicting that *=ka* is an illocutionary operator, one would expect that *=ka* would take scope over the speaker of the utterance rather than the subject of the matrix clause. The following examples show that this is indeed the case for *=ka*:

- (161) *Context: Kuto told you that he might come to an event and you repeat this to someone else.*

Kuto	ro	a'o	vaka,	mo	o'u-i	ap-an-a'ai= ka
Kuto	AG	say	NP.EVID,	1SG	come-DEF	ASSUM-1P-FUT.do= EVID

‘Kuto said I might come.’

In this example, *mo* refers to the speaker rather than the subject of the matrix clause, and *=ka* is scoping over the speaker. It is showing that the ‘speaker’ has evidence for Kuto saying that the speaker might come. This evidence could be that the speaker overheard Kuto telling someone that the speaker might be coming to a certain event. There does not seem to be a reportative type of expression in Urama where the subject of the clause refers to themselves in the first person:

- (162) Kuto ro a'o vaka, nu o'u-i ap-a'ai=**ka**
 Kuto AG say NP.EVID 3.SG come-DEF ASSUM-FUT.do=**EVID**
 'Kuto said that he might come.'

The evidential =*ka* in (162) is scoping over the speaker as the speaker holds some type of evidence for what Kuto said. Perhaps Kuto told the speaker that he might be coming. Peterson (2010) explains that when the evidence "is oriented towards the subject of the matrix clause, and not the speaker of the sentence [this] is the crucial interpretation that indicates semantic embedding, and that evidentials in St'át'imcets are propositional operators and not illocutionary ones" (Peterson, 2010, p. 121).

In example (163), both of the '=*ka*'s are oriented towards the speaker of the utterance. The only way to be sure of this though, is through the use of judgments given by a native speaker. The Urama language consultant stated that the only possible interpretations of this are that the speaker must have either heard John saying that they (the speaker) *might win the game*, or that the speaker heard *someone else* saying that *John is saying I might win the game*, and the speaker is now repeating this exactly. It is not possible that =*ka* is providing evidence of any description for *John*, the subject of the matrix clause.

- (163) *Context: John said something but I couldn't hear so you repeat it for me.*
 John ai-a'o=**ka** mo ro orioi eidai ap-an-a'ai=**ka**
 John CERT-say=**EVID** 1SG AG game take ASSUM-1P-do=**EVID**
 'John is saying I might win the game.'

We see the same thing happening in this example, where =*ka* scopes over the speaker, rather than the subject – *Meri*:

- (164) Meri ro ai-iraromo=**ka** nu imatomodio mere-i mea=**ka**
 Mary AG CERT-think=**EVID** 3SG teacher person-DEF good=**EVID**
 'Meri thinks her teacher is nice.'

In example (164), the only possible interpretation is that the speaker holds some type of evidence for what Meri is thinking. Meri may have *told* the speaker that she thinks the teacher is nice, or the speaker overheard someone else saying *Meri thinks her teacher is nice*. =*ka* is unable to provide evidence for Meri, as Meri is not the speaker.

The results of the Embeddability test show that =*ka* is unable to be semantically embedded. In each case =*ka* scopes over the speaker of the utterance, rather than the subject of the matrix clause. All examples are interpreted as the matrix clause plus the embedded clause entailing evidence on behalf

of the speaker, rather than the subject. It is only through judgments from a native speaker of Urama, that the examples were able to be interpreted correctly. Due to the fact that the evidence is oriented towards the speaker of the utterance, rather than the subject of the matrix clause, this means that $=ka$ is acting as an illocutionary operator, and as a non-modal evidential. This test is unable to provide examples involving $=\emptyset$ as all elicitation attempts to omit $=ka$ in the subordinate clause were judged to be ungrammatical.

4.5 Summary

The table below shows whether or not the particle $=ka$ passed the different tests which were conducted above. This table was taken from Peterson (2010, p. 124) where the results of the same tests on St'át'imcets and Quechua were provided. The results from Urama were added alongside these:

Table 2: Test Results

	St'át'imcets	Quechua	Urama
Felicitous is p is known to be false? ⁹	No	Yes	Yes
Pass assent/dissent test?	Yes	No	No
Semantically embeddable?	Yes	No	No

Table 3 gives a propositional/illocutionary typology based on the tests to determine the level of meaning that $=ka$ is operating at (Peterson, 2010, p. 124). Using this table we are able to translate the results from the above tests into levels of meaning:

Table 3: Test Results: Propositional or Illocutionary

	Yes	No
Felicitous is p is known to be false?	Illocutionary	Propositional
Pass assent/dissent test?	Propositional	Illocutionary
Semantically embeddable?	Propositional	Illocutionary

⁹ Matthewson (2011) describes that the data given for St'át'imcets shows that “the false-prejacent test is invalid as a way of showing that an evidential is non-modal” (p. 353). This is due to informational epistemic modals being felicitous if the prejacent is known to be false. Matthewson states that this test can only produce evidence that the evidential may have a different requirement from other modals. “As for whether or not the speaker can know the prejacent to be false, this also provides no evidence against the modal status of an evidential” (Matthewson, 2011, p. 353).

From the tests which were conducted, and from the tables above, it can be determined that *=ka* is consistently operating at the illocutionary rather than the propositional level of meaning. According to these tables, it appears that the results of the analysis of *=ka* is identical to the results from Quechua in regards to these three tests. This means that along with a number of evidentials from Quechua, *=ka* is also acting as an illocutionary operator.

As Peterson (2010) explains, “the outcome of these tests as applied to the... data will help us determine the appropriate modal and non-modal analysis” (p. 125). Since the tests show that *=ka* is functioning at the illocutionary level of meaning, the appropriate analysis of *=ka* is a non-modal one. *=ka* will therefore be analysed under a dynamic semantics approach where evidentials are seen as separate from epistemic modals. In dynamic semantics, “the interpretation of an utterance (with or without an evidential) is both dependent on context, and changes the context” (Peterson, 2010, p. 23).

It is now known, based on the results of the above tests, that *=ka* appears to be functioning as an illocutionary operator. Without tests however, it is assumed that since *=ra* is used with imperatives and interrogatives, which are illocutionary in nature, one can tentatively conclude that *=ra* is also illocutionary.

4.5.1 Addressee-oriented evidence

Although we saw the way in which *=ka* functions in regards to these tests, the occasions where *=ka* has not appeared where expected are curious. The *=Ø* morpheme, which was seen to hold a type of inferential evidence for the addressee, indicates that *=ka* has an additional function which likely has to do with the ‘common ground’ between the speaker and the addressee. The fact that *=ka* expresses addressee related evidence rather than speaker-oriented information is an area which has not surfaced in the literature. Aikhenvald (2004) discusses only two languages in which addressee-oriented evidence has been discovered – Meithei and Archi.

Meithei is a Tibeto-Burman language which has a range of evidential strategies that all differ in meaning (Aikhenvald, 2004, p. 144). This evidential-type marker in Meithei expressing non-firsthand evidence shows that although the speaker has evidence for their utterance, the addressee does not have evidence for what the speaker said. The following example is only grammatical when the speaker has accepted the perspective of the addressee:

- (165) əy čák čá-ləm-lə-e
 I rice eat-NONFIRSTH-PERF-ASSERT
 ‘I have eaten’ (for you to know) (Aikhenvald, 2004, p. 234)

Interestingly, this non-firsthand marker in Meithei is also used for the narration of past events, perhaps in the same way that =*ka* is used throughout the narrative in order to describe things that have *just* happened, and to help move the story along.

In Archi, a non-firsthand marker can be used for addressee-oriented information as well. In this case, either the speaker *or* the addressee, *or* both were not eyewitnesses to the action before the statement was uttered. The non-firsthand marker in Archi is also able to be used if “the speaker participated in a situation the meaning of which is unknown to the hearer, and turns out to be unexpected for the hearer” (Aikhenvald, 2004, p. 199). The example provided in order to help explain this use of the non-firsthand marker is this: the speaker could say to the addressee, ‘I hate you-non-firsthand’, this can be said in this way if the addressee did not know that the speaker hates her, and this is new information for the addressee (Aikhenvald, 2004, p. 233).

Aikhenvald (2004) explains that in both Archi and Meithei, the evidential-type markers expressing first person non-firsthand evidence provide “information about the speaker which is unknown and new to the addressee, effectively covering two observers (‘you’ and ‘me’)” (p. 234). This appears to be similar to what can be seen with =*ka* in Urama, where =*ka* exhibits knowledge of information source unfamiliar to the addressee. However, =*ka* also appears to have an additional function in which evidence held on behalf of the addressee for what the speaker utters is shown. This is the = \emptyset morpheme. This is where =*ka* disappears where it would normally be expected to appear. This occurs only when the addressee *has* evidence for what the speaker is saying. While =*ka* relates to things that the speaker has evidence and information for, = \emptyset expresses the inferred evidence that the addressee has for what the speaker is saying. For example, we can see the difference between (166) and (167):

- (166) *Context: While you were out of the room, I fell over. You come back in time to see me standing up again.*

Mo ai-n-omoa= \emptyset
 1SG CERT-1P-fall= \emptyset
 ‘I fell.’ (and you see some evidence for this having happened)

- (167) *Context: While you were out of the room, I fell over. When you come back in I am already back to work and you can’t tell that anything happened.*

Mo ai-n-omoa=**ka**
 1SG CERT-1P-fall=**EVID**
 ‘I fell.’ (and you have no idea whether or not something actually happened)

In order for the speaker to know that the addressee also has evidence for the information provided in their utterance, there needs to be some type of shared knowledge in the common ground between them. Information which is in the common ground is reported as new evidence, regardless of whether it is new for the speaker, or for the addressee.

The implications of such an evidential-type marker expressing both propositional *and* illocutionary force would be really interesting, as this has not been reported in the literature in this context. While evidentials in Archi and Meithei express evidence that the speaker holds, and at the same time a lack of evidence for the addressee (Aikhenvald, 2004), =*ka* appears to be able to express both evidence held by the speaker, and evidence held by the addressee, depending on whether =*ka* or = \emptyset is used. There appears to be two meanings bound into the one morpheme, =*ka*.

5. Conclusion

This thesis aimed at determining the meaning and status of the evidential $=ka$ in Urama. First, it was necessary to give a detailed background on the area of modality and evidentiality throughout the literature. This provided a solid base from which to begin the analysis of $=ka$. In chapter 3 the necessary tests (namely the Known Truth/Falsity test, the Assent/Dissent test, and the Embeddability test), took place in order to decide whether the morpheme $=ka$ was functioning at a propositional or an illocutionary level of meaning. It was discovered that $=ka$ operated at the illocutionary level consistently throughout the tests. The next step translated the outcomes of the tests into whether or not $=ka$ is a modal evidential coming under the branch of epistemic modality, or whether $=ka$ is a non-modal evidential, in a separate category to modality. Since $=ka$ was found to be illocutionary in nature, through a dynamic semantics approach to evidentials, it was determined that $=ka$ is a non-modal evidential.

As well as determining that $=ka$ is a non-modal evidential, and an illocutionary operator working at the sentential level rather than the propositional level of meaning, this study found that $=ka$ appears to contain two morphemic meanings within the one morpheme. While $=ka$ expresses evidence held by the speaker, the lack of $=ka$ ($=\emptyset$) where it is expected to appear, indicates that the speaker knows that the addressee also has evidence was what the speaker is uttering. Where relevant, the tests showed that $=\emptyset$ is operating at the propositional level of meaning, in comparison to $=ka$ at the illocutionary level. Therefore, while $=ka$ operates as a non-modal evidential, $=\emptyset$ acts as an epistemic modal evidential.

Peterson (2010) explains how if an evidential is propositional, it modifies the content of a proposition. On the other hand, if the evidential is illocutionary, it modifies something more than the basic proposition; it modifies things that are related to the speaker of the utterance. This basic definition of propositional versus illocutionary provides an excellent example of the relationship between $=ka$ and its other morphemic meaning held by $=\emptyset$. While $=ka$ has been found to operate at the illocutionary level, meaning by this definition that it modifies things which are related to the speaker, $=\emptyset$ is propositional and doesn't relate to the speaker, therefore allowing it to affect the addressee.

This study has played a role in helping to determine the ways in which evidentials in the world's languages are treated and can be tested. By providing a profile for the evidential $=ka$, this thesis also adds to the discussion of evidentials in Papua New Guinea. San Roque and Loughnane (2012)

provide a comparative survey of languages spoken in Papua New Guinea which employ grammaticised evidentiality. Aikhenvald (2004) discusses how necessary it is to provide descriptions of evidential systems especially in the areas where there is little-known data on these systems, including in Papua New Guinea. This study on Urama evidentials is therefore important to the studies of Papuan languages in general, but also to studies focusing on the Kiwai language family. Aikhenvald (2004) states that “evidentials in New Guinea languages remain a puzzle” (p.383), and that for many languages it is not known whether the language contains just one grammatical category expressing information source, or whether there are multiple categories.

A main topic of interest in this thesis is the fact that $=ka$ appears to hold two different levels of meaning, operating both as a propositional *and* an illocutionary operator depending on whether $=ka$ appears or does not appear where expected. This outcome of the tests predicts that $=ka$ is more interesting than just functioning as an evidential showing information source for the speaker. Aikhenvald (2004) discusses only two other languages which contain evidentials that interact with both speaker and addressee evidence. However, the non-firsthand evidentials in these languages show that the information given is new to the speaker, they do not hold any evidence that the addressee already has for the utterance. In comparison, while the addition of $=ka$ in Urama means that the addressee lacks evidence for the speaker’s utterance, the lack of $=ka$ ($=\emptyset$), signifies that there is evidence for both the speaker *and* the addressee for what the speaker is uttering.

This outcome of the $=ka/\emptyset$ distinction in meaning, adds to the cross-linguistic data on evidentials as this appears to be a new category for the placement of evidentials. While $=ka$ acts as a non-modal evidential, according to the tests $=\emptyset$ functions as a modal evidential. Although the literature has stated that some evidentials may hold both modal and evidential values, it has not been discussed that an evidential may contain two different morphemic meanings.

Appendix A – Paradigm of Urama verb inflections

This paradigm of Urama verb inflections is based on the verb *odau* ‘go’. It was created by Alex Muir, and will appear in Brown et al. (in prep).

Positive Polarity Declaratives

Present and Immediate Past tense

	Singular	Dual	Trial
1P	nodau ka	nodau kaido	nodau bikaumo
2P	odau ka	odau kaido	odau bikaumo
3P	odau ka	odau kaido	odau bikaumo

Near Past (up until yesterday)

	Singular	Dual	Trial
1P	nodau vaka	nodau vakaido	nodau bivakaumo
2P	odau vaka	odau vakaido	odau bivakaumo
3P	odau vaka	odau vakaido	odau bivakaumo

Intermediate Past (yesterday):

	Singular	Dual	Trial
1P	nodau ra	nodau dudo	nodau bidumo
2P	odau ra	odau dudo	odau bidumo
3P	Odau	odau dudo	odau bidumo

Distant Past (earlier than yesterday):

	Singular	Dual	Trial
1P	ponodau ra	ponodau raido	ponodau biraumo
2P	podau ra	podau raido	podau biraumo
3P	Podau	podau ido	podau bimo

Near Future (until tomorrow):

	Singular	Dual	Trial
1P	odau na'ai ka	odau na'ai kaido	odau bi na'ai kaumo
2P	odau a'ai ka	odau a'ai kaido	odau bi a'ai kaumo
3P	odau a'ai ka	odau a'ai kaido	odau bi a'ai kaumo

Distant Future (from tomorrow on):

	Singular	Dual	Trial
1P	odaui no'u ka	odaui no'u kaido	odaui bi no'u kaumo
2P	odaui o'u ka	odaui o'u kaido	odau o'u bikaumo
3P	odaui o'u ka	odaui o'u kaido	odau o'u bikaumo

Negative Polarity Declaratives

Future:

	Singular	Dual	Trial
1P	odaui taho'o aika	odaui taho'o aika	odaui taho'o aika
2P	odaui taho'o aika	odaui taho'o aika	odaui taho'o aika
3P	odaui taho'o aika	odaui taho'o aika	odaui taho'o aika

Non-future:

	Singular	Dual	Trial
1P	odaui haka	odaui haka	odaui haka
2P	odaui haka	odaui haka	odaui haka
3P	odaui haka	odaui haka	odaui haka

Positive Polarity Interrogatives

Present tense:

	Singular	Dual	Trial	Plural
1P	(a)nodau ra	(a)nodau dudo	(a)nodau bidumo	(a)nodau dumo
2P	(a)vodau ra	(a)vodau dudo	(a)vodau bidumo	(a)vodau dumo
3P	(a)vodau ra	(a)vodau dudo	(a)vodau bidumo	(a)vodau dumo

Near Past tense (up until yesterday):

	Singular	Dual	Trial	Plural
1P	(a)nodau ra	(a)nodau raido	(a)nodau biraumo	(a)nodau raumo
2P	(a)vodau ra	(a)vodau raido	(a)vodau biraumo	(a)vodau raumo
3P	(a)vodau ra	(a)vodau raido	(a)vodau biraumo	(a)vodau raumo

Intermediate Past tense (yesterday):

	Singular	Dual	Trial	Plural
1P	(a)nodau ra	(a)nodau dudo	(a)nodau bidumo	(a)nodau dumo
2P	(a)odau ra	(a)odau dudo	(a)odau bidumo	(a)odau dumo
3P	(a)odau	(a)odau dudo	(a)odau bidumo	(a)odau dumo

Distant Past tense (earlier than yesterday):

	Singular	Dual	Trial	Plural
1P	(a)nodau	(a)nodau ido	(a)nodau bimo	(a)nodau mo
2P	(a)odau	(a)odau ido	(a)odau bimo	(a)odau mo
3P	(a)odau	(a)odau ido	(a)odau bimo	(a)odau mo

Near Future tense (until tomorrow):

	Singular	Dual	Trial	Plural
1P	odau na'ai ra	odau na'ai dudo	odau bi na'ai dumo	odau na'ai dumo
2P	odau va'ai ra	odau va'ai dudo	odau bi va'ai dumo	odau va'ai dumo
3P	odau va'ai ra	odau va'ai dudo	odau bi va'ai dumo	odau va'ai dumo

Distant Future tense (from tomorrow on):

	Singular	Dual	Trial	Plural
1P	odau no'u ra	odau no'u dudo	odau no'u bidumo	odau no'u dumo
2P	odau vo'u ra	odau vo'u dudo	odau (bi) vo'u (bi)dumo	odau vo'u dumo
3P	odau vo'u ra	odau vo'u dudo	odau (bi) vo'u (bi)dumo	odau vo'u dumo

Negative Polarity Interrogatives

Future:

	Singular	Dual	Trial	Plural
1P	odau taho'o no'u ra	odau taho'o no'u raido	odau taho'o no'u biraumo	odau taho'o no'u raumo
2P	odau taho'o vo'u ra	odau taho'o vo'u raido	odau taho'o vo'u biraumo	odau taho'o vo'u raumo
3P	odau taho'o vo'u ra	odau taho'o vo'u raido	odau taho'o vo'u biraumo	odau taho'o vo'u raumo

Non-Future:

	Singular	Dual	Trial	Plural
1P	odau hara	odau hara	odau hara	odau hara
2P	odau hara	odau hara	odau hara	odau hara
3P	odau hara	odau hara	odau hara	odau hara

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