

## A Comparative Study of the Evidential/Epistemic Markers: *hazi* in Ryukyuan, *hazu* in Uchinaa-Yamatuguchi, and *hazu* in Japanese

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### Abstract

Peculiar to pre-war Okinawa, Ryukyuan is a threatened East-Asian language with the grammatical category known as evidentiality. In this paper, I provide an overview of the evidential system in Ryukyuan, then analyze the semantic properties of *hazi* in Ryukyuan, *hazu* in Uchinaa-Yamatuguchi, and *hazu* in Japanese. This study aims to clarify three central aspects of the grammatical category. Firstly, *hazu* in Uchinaa-Yamatuguchi does not require firm or reliable grounds, whereas *hazi* in Ryukyuan and *hazu* in Japanese do. Secondly, neither *hazi* in Ryukyuan nor *hazu* in Uchinaa-Yamatuguchi possesses the function of ‘realization’, which is used when the speaker understand the logic of causal relations. Thirdly, *hazi* appears to require the speaker’s belief or certainty that derives from available grounds, rather than from logical causal relations.

Keywords: evidentiality, epistemic marker, direct, inferential/assumed, reportative, source of information, realization

### 1. Introduction

This study presents analysis of three epistemic markers *hazi* in Ryukyuan (or Luchuan), *hazu* in Uchinaa-Yamatu variety and *hazu* in Japanese. First, let me briefly explain how these three languages/varieties are different from and related to each other. Ryukyuan languages are spoken in the Ryukyu Islands (Okinawa Prefecture and Amami in Kagoshima Prefecture), which are the southernmost islands of Japan. In 2009, the UNESCO Atlas of the World’s Languages in Danger identified six Ryukyuan languages: Amami, Kunigami, Okinawa, Miyako, Yaeyama, and Yonaguni (Moseley 2009). The language called Ryukyuan in this study refers to Okinawan language, which is spoken in the central and southern part of Okinawa. Uchinaa-Yamatuguchi is a variety widely spoken in Okinawa, especially by younger generations.<sup>1</sup> The epistemic marker *hazu* in Uchinaa-Yamatuguchi appears to be morphologically and phonologically similar to *hazi* in Ryukyuan; however, the uses of these two expressions are epistemologically different. Precisely *hazi* in Ryukyuan is analyzed as evidential marker to indicate that the speaker makes an assumption based on general knowledge or habit (Arakaki

2013), whereas *hazu* in Uchinaa-Yamatuguchi is not regarded as an evidential marker. This study attempts to clarify their semantic differences by comparing the features of *hazu* in Japanese.

In order to effectively examine these epistemic markers, it is first necessary to know that such a grammatical category called evidentiality exists, which marks the source of the speaker’s information in Ryukyuan languages (Arakaki 2013; Izuyama 2012). Thus, I will first provide an overview of evidential system in Ryukyuan then illustrate the semantic properties of *hazi* in Ryukyuan, *hazu* in Uchinaa-Yamatuguchi, and *hazu* in Japanese. Then, I will attempt to clarify the features of *hazu* in Uchinaa-Yamatuguchi and *hazi* in Ryukyuan — how different they are from Japanese *hazu*, what kind of evidence is required to use each form.

### 2. Evidential system in Ryukyuan

Evidentiality is a grammatical category that indicates the source of information, or how a speaker learns information (Chafe and Nicholas 1986; Aikhenvald 2003, 2004). According to Aikhenvald (2004), nearly a quarter of the world’s languages have evidential systems.

That is to say, they specify the source type for the speaker's information, whether the speaker saw it, heard it, or inferred it from indirect evidence, or heard it directly from someone else. The concept of evidentiality has only recently been recognized as a linguistic phenomenon in its own right and, until recently, evidential particles had been misidentified and incorrectly categorized in many languages (Aikhenvald 2004). Similarly, in Ryukyuan linguistics, most traditional scholarship focuses largely on temporal categories such as tense and aspect; therefore, the concept of evidential has been neglected (Arakaki 2015). Significantly, many researchers came to recognize that the traditional framework was insufficient to explain these linguistic properties, and some kind of modal or evidential markers are involved in these phenomena.

As a way of drawing an overall picture of these phenomena and discussing the assumed evidential and the epistemic markers to be analyzed in this study, I will introduce four evidentials in Okinawan — direct, inferential, assumed, and reportative.<sup>2</sup> These are illustrated in (1a) to (1d).<sup>3</sup>

- (1)a. *Yoko ga juubaN nic-ee-N.*  
 Yoko NM dinner cook-RES-**DIR**  
*p* = 'Yoko has cooked dinner.'<sup>4</sup>  
 EV = Speaker has visual evidence of *p*.
- b. *Yoko ga juubaN nic-ee-N tee.*  
 Yoko NM dinner cook-RES-**DIR INF**  
*p* = 'Yoko has cooked dinner.'  
 EV = Speaker infers *p*.  
 (based on visual evidence of cooked meal)
- c. *Yoko ga juubaN nic-ee-ru hazi.*  
 Yoko NM dinner cook-RES-ATTR **ASSUM**  
*p* = 'Yoko has cooked dinner.'  
 EV = Speaker assumes *p*.  
 (based on reasoning)
- d. *Yoko ga juubaN nic-ee-N Ndi.*  
 Yoko NM dinner cook-RES-**DIR REP**  
*p* = 'Yoko has cooked dinner.'  
 EV = Speaker heard that *p*.  
 (based on the report of another speaker)

(Arakaki 2013:2)

All examples in (1) feature a resultative aspect. Example (1a) is used by a speaker who has direct evidence of the event, in this case, the speaker's witness.<sup>5</sup> Examples (1b) to (1d) show how the three indirect evidentials are used. The speaker in (1b) makes an inference based on the visual evidence, namely a cooked meal. The speaker is certain that there is a cooked meal, but has to infer the identity of the cook. The assumed evidential *hazi* in example (1c) is used to show that the speaker's reasoning is based on general knowledge gained through lived experience. Example (1d) indicates that the speaker acquired the information from another person, in this case, the agent herself or a person who witnesses the agent's action.

As example (1c) indicates, *hazi* in Ryukyuan is seen as an assumed evidential marker (Arakaki 2013; 2015) rather than the epistemic marker; however, note that this analysis has not been fully recognized among scholars of Ryukyuan languages yet. Although, as earlier stated, some scholars came to recognize the concept of evidential as essential, they tend to focus on a particular morpheme which appears in certain form, continuative or progressive past, by narrowing the concept of evidential to a witness. However, since speakers of Ryukyuan appear to place significant value on the source of information, not just observational information but also inferred, assumed, and reportative sources as well, it is clear that evidentiality needs further systematic linguistic analysis. To clarify, these sources of information are reflected in the morphological changes that occur within the words themselves, as shown in (1a) – (1d).

### 3. Assumed evidential *hazi* in Ryukyuan

#### 3.1 Evidence licenses the use of *hazi*

At present, careful studies of *hazi* in Ryukyuan are largely non-existent. The Dictionary of Okinawan Language states that *hazi* indicates two meanings; first, *hazi* is used to describe what the speaker believes will happen, second, *hazi* indicates the speaker's inference (1963:210). The first meaning roughly corresponds to

*should* in English which requires the firmer evidence than does the latter, and the second meaning approximately corresponds to *may* or *probably*, the evidence of which is weaker than the first meaning. However, this explanation is still unclear concerning what kind of inference or assumption is involved, or what kind of evidence it requires. As we have seen in (1b) in the previous section, an inferential evidential *tee* appears in the language, which is based on evidence the speaker can perceive. On the other hand, *hazi* describes the speaker's assumption objectively based on general knowledge or habit. This usage is fairly different from the basic usage of the inferential evidential *tee*. Such differences as well as the semantic features of *hazi* have not been explicated in the definition of the dictionary.

What kind of evidence licenses the use of *hazi* is discussed in Arakaki (2013) mainly focusing on the first meaning in the dictionary. The second inferential meaning in the dictionary will be discussed later in this section. To highlight the conditions that are required to use *hazi*, the method used in Izvorski (1997) is applied. Izvorski analyzes a phenomenon known as the perfect of evidentiality (PE), which expresses a particular evidential category, one which is in the present perfect or historically derived from the present perfect. Izvorski claims that the perfect of evidentiality behaves like *apparently* does in English. Example (2a) below shows that the use of *must* in an English sentence is justified by the proposition *John likes wine a lot*. On the other hand, *apparently* in English cannot be used simply on the basis of knowing the proposition, as the infelicity of (2b) shows.

(2) Knowing how much John likes wine...

- a. ... he must have drunk all the wine yesterday.
- b.# ...he apparently drank all the wine yesterday.

(Izvorski 1997:6)

Similarly, the case of Bulgarian indicates that the proposition *John likes wine a lot* does not license the use of the perfect of evidentiality, as example (3b) indicates.

(3) Knowing how much Ivan likes wine...

- a....toj trjabva da e izpil vsiškoto vino včera.  
he must is drunk all-the wine yesterday  
'...he must have drunk all the wine yesterday.'
- b.#...toj izpil vsiškoto vino včera.  
he drunk-PE all-the wine yesterday  
'...he apparently drank all the wine yesterday.'

(Izvorski 1997:6)

The case in which an epistemic modal is used is accepted as in (3a), whereas example (3b), in which a perfect of evidentiality is used, is not acceptable. Izvorski claims that English *apparently* requires "some observable result of John's drinking all the wine, perhaps many empty bottles or someone's account of the event of drinking" (1997:6). Let us move on to the case of *hazi* in Ryukyuan. In example (4), *hazi* is used with resultative aspect.

(4) Knowing how much Taro likes wine...

- #... cinuu Taruu ga wain muru  
yesterday Taruu NM wine all  
nud-ee-ru hazi.  
drink-RES-ATTR ASSUM  
'(I assume) Taro drank all the wine yesterday.'

The unacceptability of example (4) suggests that *hazi* in Ryukyuan is not licensed to be used just on the basis of the fact that *Taruu likes wine a lot*. In addition to the proposition presented, if the speaker knows that there were empty wine bottles in Taruu's room and knows that it is a habit for Taruu to drink a lot of wine every day, (4) would be acceptable. This implies that the speaker has to acquire objective evidence such as empty bottles of wine observed by the speaker or someone's eyewitness, and also some kind of background information about the actor's habit in order to draw a judgment. Next, let us consider the sentence with *hazi* in the past tense. To use example (5), the speaker needs to know some kind of certain evidence, for example, the speaker found the document with the agent's handwriting on the desk, or the speaker knows that it was the agent's responsibility to write

the document. It suggests that the use of *hazi* requires rather strict evidence that is sufficient to make an assumption that the agent has done/was doing a certain activity.

- (5) *Miki ga kac-oo-ta-ru hazi.*  
 Miki NM write-CON-PAST-ATTR ASSUM  
*p* = ‘Miki was writing (it).’  
 EV = Speaker assumes *p*.

Recall that there are two definitions of *hazi* in the Dictionary of Okinawan Language. One meaning of *hazi* describes what the speaker believes will happen, the other meaning of *hazi* indicates the speaker’s inference. The discussion above focuses on the first definition. Next, I will examine how *hazi* is used in the sense of the second definition. Let us consider the case in which a speaker utters some kind of general observation.

- (6) *ʔacjaa ʔami hui-ru hazi.*<sup>6</sup>  
 tomorrow rain fall-ATTR ASSUM  
*p* = ‘It will rain tomorrow.’  
 EV = Speaker assumes *p*.

The speaker of (6) could infer the proposition based on his/her knowledge, which, for example, may be derived from the fact that the rainy season has arrived, or the present situation with dark clouds in the sky portends rain. In this case, it is impossible to acquire firm evidence, since these weather events are natural phenomenon, and the event has not taken place yet; but it should not be the mere speaker’s guess but some reasoning is required.

The next example shows that *hazi* can be used when it is derived in general knowledge such as in events that happen repetitively.

- (7) *Nama kaki ʔut-oo-ru hazi.*  
 now persimmon sell-CON-ATTR ASSUM  
*p* = ‘Persimmons are sold now.’  
 EV = Speaker assumes *p*.

The speaker in (7) knows that persimmons are now sold in the market because they are in season. In this case, the speaker deduces his/her assumption from the general knowledge that

everyone shares. Next, let us turn to an example that expresses an assumption based on personal judgement rather than on general knowledge people usually share.

- (8) *Yoko ga ʔic-u-ru hazi.*  
 Yoko NM go-IMPF-ATTR ASSUM  
*p* = ‘She will go.’  
 EV = Speaker assumes *p*.

Sentence (8) can be an answer to a question about who goes shopping. When the speaker knows that Yoko will go, for example, because it is Yoko’s habit to go shopping every weekend, or because Yoko is the only one who can go there by car, (8) can be used. The speaker can draw an inference based on habit or based on background knowledge about the agent. In this section, we have seen that *hazi* can be used to signal evidence induced from past experience, as shown in examples (6)–(8). Conversely, the resultative, or past tense forms, do require more concrete forms of evidence, as shown in (4) and (5). It is true that the relation between the assumed evidential and verb tense should be investigated further, but, as has already been shown in this analysis, we can now see that *hazi* expresses a speaker’s assumption based on his or her general knowledge, and the agent’s habit, not just the speaker’s guess.

### 3.2 Semantic scope of *hazi*

Next, let us examine the case in which *hazi* is used in negative and interrogative sentences. As example (9) shows, *hazi* can co-occur with the negative marker. Note that the scope of negation is inside of the assumed evidential. That is to say, to use *hazi*, the speaker must have appropriate information to negate the proposition. For example, the speaker heard that Miki said she was not going to eat dinner, or the speaker knows that Miki has a severe stomachache. As (9b) shows, the syntactic construction which negates the assumed evidential does not exist. In other words, the assumed evidential cannot be negated.

- (9)a. *Miki ja juuban kam-aN hazi.*  
 Miki TOP dinner eat-NEG ASSUM  
*p* = ‘Miki will not eat dinner.’

EV = Speaker assumes *p*.

- b. \**Miki ja juuban kam-u-N hazi-aN.*  
 Miki TOP dinner eat-IMPV-DIR ASSUM-NEG  
 Intended meaning: ‘I don’t assume Miki  
 will eat dinner.’

Next, let us examine how *hazi* behaves when it appears in interrogative sentences. The question marker *-i* is attached to *hazi* in (10a) and to the proposition in (10b) respectively. The fact that both examples (10a) and (10b) are judged to be infelicitous suggests that neither proposition nor *hazi* can be the focus of questions.

- (10) a. \**Miki ga kac-oo-ru hazi-i.*  
 Miki NM write-con-ATTR ASUM-Q  
 Intended meaning: ‘Should Miki be  
 writing (the document)?’  
 b. \**Miki ga kac-oo-ru-i hazi.*  
 Miki NM write-con-ATTR-Q ASSUM  
 Intended meaning: ‘Should Miki be  
 writing (the document)?’

It should be noted that all three indirect evidentials in Ryukyuan, including inferential and reportative evidentials, cannot appear within the scope of negation or in the focus of a question (Arakaki 2013).

#### 4. Epistemic marker *hazi* in Uchinaa-Yamatuguchi

##### 4.1 Semantic feature of *hazi* in Uchinaa-Yamatuguchi

Comprehensive studies of epistemic markers in Uchinaa-Yamatuguchi have been very limited, compared with the studies of those in Ryukyuan. In other words, one could say that this language variety of Uchinaa-Yamatuguchi itself has drawn a little attention since it is considered as a pidgin or creole of Ryukyuan and Japanese.<sup>8</sup> This usage of *hazi* has been used in Amami as well in the variety of Tonhutugo, which is spoken in younger generations in Amami (Long 2013).

Takaesu (1994) presents *hazi* as a mood marker, which signifies the speaker’s inference. She points out that *hazi* in Uchinaa-Yamatuguchi is clearly different from *hazi* in Japanese in that the semantic sphere of the former is much

wider than the latter. For example, according to Takaesu, Japanese features some variations that speakers use to make inferences such as *to-omoo* ‘think’, *no-yooda* ‘look/sound’, *rasii* ‘it is said/seem’, *ni-chigainai* ‘must’, *suru hazuda* ‘should’, depending on the degree of certainty, while *hazi* in Uchinaa-Yamatuguchi can be used irrespective of the degree of certainty (1994: 262). Ichihara (2006) also points out that the usage and meaning of *hazi* in Uchinaa-Yamatuguchi is varied depending on generations, mainly expressing a speaker’s inference rather than a speaker’s strong belief. Uchinaa-Yamatuguchi speakers whose linguistic background is closer to Ryukyuan rather than Japanese tend to use *hazi* in a sense that is close to “be supposed to” (Ichihara 2006:14).

Takaesu also claims that this *hazi* in Uchinaa-Yamatuguchi semantically and morphologically corresponds to *hazi* in Ryukyuan. It is true that the usages of these two look similar; however, *hazi* in Uchinaa-Yamatuguchi appears to focus on the second definition in the dictionary, a weaker inference without requiring firm grounds of evidence.

- (11) To answer the question what time the store to be open  
*moo zyu-ji dakara, tabun ai-teiru*  
 already 10 o’clock so maybe open-CON  
*hazi yo.*  
*hazi FP*  
 ‘It’s 10 o’clock already, so the store is maybe open.’  
 (Takaesu 1994:262)

The speaker of example (11) has never been to the store in question; however, he/she makes an inference based on the general knowledge that stores usually open at 10 o’clock. Evidence for the next example sounds a little firmer, since the speaker makes an inference based on an actual situation.

- (12) Knowing that Taro is not here  
*Taro wa kaet-ta hazu.*  
 Taro TOP return-PAST *hazi*  
 ‘Taro must/may have gone.’  
 (Takaesu 1994:262)

The speaker of example (12) knows the fact that Taro is not here. Taro may have tentatively excused himself, or he may not have arrived yet. Despite these other possibilities, the speaker can use *hazu* to convey his conjecture based upon the actual situation.

The next example shows that *hazu* can be used on the grounds of a reliable report from the agent.

- (13) *kinoo zyu-ji ni kuru to*  
 yesterday 10 o'clock at come COMP  
*itte-ta kara, kyo wa*  
 say-PAST because today TOP  
*tyanto jyu-ji ni kuru hazu yo.*  
 rightly 10 o'clock at come *hazu* FP  
 '(He) should come at 10 o'clock today  
 because yesterday he said he would come  
 at 10 o'clock.'  
 (Takaesu 1994:262)

The basis of conjecture in example (13) is the report made by the agent himself. Example (11) – (13) suggests that *hazu* can be used based on general knowledge, the actual situation, or a report from the agent.

Let us now consider parallel situations in which we have seen uses of *hazi* in Ryukyuan. The question is whether or not *hazu* in Uchinaa-Yamatuguchi requires as firm evidence as *hazi* in Ryukyuan requires. Recall that *hazi* is not licensed to be used simply on the basis of the fact that Taruu likes wine a lot as (4) above shows. In addition to the proposition presented, the speaker needs to know that there were empty wine bottles in Taruu's room and knows that it is a habit for Taruu to drink a lot of wine every day.

- (14) *Kinoo Taro ga wain zenbu non-da*  
 yesterday Taro NM wine all drink-PAST  
*hazu.*  
*hazu*  
 '(I guess) Taro drank all the wine  
 yesterday.'

The speaker in example (14) could have firm grounds such as the empty bottles of wine or his/her knowledge of Taro's drinking habits;

however, even without such reasoning, (14) is acceptable so long as the speaker thinks that there is a possibility that Taro could have drunk all the wine yesterday.

#### 4.2 Semantic scope of negation

In this section, I will provide a brief description of how *hazu* co-occurs with negation. As (15a) shows, the negation is attached to the proposition. The speaker infers that the proposition expressed will not happen. On the other hand, the speaker's inference cannot be negated as in (15b).

- (15)a. *Miki wa yuugohan tabe-nai hazu.*  
 Miki TOP dinner eat-NEG *hazu*  
 'Miki may not eat dinner.'  
 b. ??*Miki wa yuugohan tabe-ru*  
 Miki TOP dinner eat-NPST  
*hazu-nai.*  
*hazu-NEG*  
 'I believe Miki won't eat dinner.'

It is difficult to draw a line between Uchinaa-Yamatuguchi and Japanese, (15b) sounds like Japanese if *hazu* is negated as in (15b). Thus, to be precise, (15b) is acceptable as an example of Japanese, but not in the use of *hazu* in Uchinaa-Yamatuguchi.

#### 5. Preceding studies on *hazu* in Japanese

Many studies focus on the epistemic marker *hazu* in Japanese; however, since the aim of this study focuses on *hazi* in Ryukyuan and *hazu* in Uchinaa-Yamatuguchi, I will simply provide a general outline of what has been studied about *hazu* in Japanese. It should be noted that *hazu-da* (*hazu* with a copula-*da*) is a central target of interest in most previous studies. This form is not used in Uchinaa-Yamatuguchi, since it has a different syntactic combination attached *da-hazu* (a copular *da* with *hazu*). I will explain the syntactic difference between these two languages in 6.2.

Takahashi (1975) classifies *hazuda* into two usages; first, 'expectation (or prediction)' that indicates degree of certainty such as estimate or

presumption, and second, ‘realization’, which is used when the speaker understands the logic of causal relations.

Morita (1980) expounds Takahashi’s classification providing three definitions of *hazuda*, in which first two definitions approximately seem to belong to ‘expectation’, whereas the third appears to correspond to ‘realization’. Firstly, Morita (1980:410) claims that *hazuda* indicates a speaker’s judgment in predicting that something should happen on the basis of given situations as in (16a). This usage contains the speaker’s confidence in his/her conclusions, which have not been proven at the time of the utterance. In (16a), the given situation that supports the speaker’s judgment is the general knowledge that express mail arrives fast. The speaker concludes that the letter should arrive today based on this background understanding. Secondly, Morita argues that *hazuda* expresses a discrepant situation that is different from the speaker’s prediction on the grounds of given conditions as in (16b). In (16b), the speaker’s prediction is that the bus should have arrived by now, but since the bus has not yet arrived, a discrepancy occurs. Lastly, Morita (1980:411) claims that *hazuda* is used to signify the speaker’s realization, understanding the present situation is a natural consequence after ascertaining the truth as in (16c). In (16c), the speaker realizes why the train has not come after finding the fact that the strike has still been going on. Morita also emphasizes that *hazuda* requires reliable and objective grounds not merely inference based on some present situation.

(16)a. *Sokutatu de daseba kyo zyu-ni tuku*  
 express by send today in arrive  
*hazuda*.

should  
 ‘If you send it by express, it should arrive today.’

b. *Moo sorosoro basu ga kuru*  
 Any-time-by-now bus NM come  
*hazuda ga osoi na*.  
 should but late FP  
 ‘The bus should come in any time by now, but it’s late.’

c. *Mada sutoraiki wa kaiketu*

yet strike TOP solve  
*sitei-nainda te*.  
 do-NEG hear  
*sorezuya, densya wa ko-nai hazuda*.  
 Then train TOP come-NEG should  
 ‘I heard the strike hasn’t solved yet.’  
 ‘Then, now I understand why the train doesn’t come.’

Noda (1984) provides a similar account to define *hazuda*, claiming that the meaning of *hazuda* expresses a natural consequence based upon knowledge the speaker possesses, though sometimes the actual situation differs from a logical inference. Teramura (1984) provides two definitions of *hazuda*, but he emphasizes the point that the speaker simply claims logical consequence — not the speaker’s inference — that could be deduced from facts that the speaker already knows. The second meaning that Teramura presents is similar to the third point Morita (1980) provides; *hazuda* is used to express the speaker’s realization or understanding when he/she came to understand the logic; what causes a certain situation. Okuda (1993) pays attention to the interrelations of *hazuda* and tense, and claims the modal meaning *hazuda* that expresses is varied depending on tense. Matsuda (1994) also considers the interrelations between *hazuda* and tense as well as detailed semantic analysis. Matsuda subdivided function of ‘expectation’ usage that Takahashi (1975) parsed into four groups; inference, logic, plan, and confirmation.

Miyake (1995) argues that *hazuda* expresses the speaker’s confident judgment in which the proposition is believed to be true by the speaker, although the proposition has not been proved objectively to be true. Therefore, the grounds for judgment should be very convincing. Moriyama (1995) explores what kind of grounds licenses the use of *hazuda*.

(17) *Sukosi netu ga aru*.  
 a bit fever NM there.is  
*Watasi wa kaze wo hii-ta*  
 I TOP cold ACC catch-PAST must  
 {*nichigainai* /\**hazuda*}  
 should

‘I have a mild fever. I certainly should have caught a cold.’

(Morita 1980)

As (17) shows, the speaker has physical sensation, fever in this case. Moriyama questions why these grounds are insufficient for the use of *hazuda* despite, it seems, there being firm reasons to draw a confident judgment. Moriyama concludes that the fact that the speaker of (17) has a fever is not a logical ground but merely a ‘present situation’. As we have seen above, Morita emphasizes that the grounds of judgment should be reliable and objective, while Moriyama regards what licenses the use of *hazuda* is a logical judgment.

Asano-Cavanagh (2009:842) argues that the term reliable and objective grounds are somewhat vague and liable to different interpretations, presenting examples in which *hazuda* can be used without reliable and objective grounds. She points to the vagueness of the terminology itself such as ‘firm faith’, ‘reliable and firm grounds’ and ‘absolute basis for assertion’ in previous studies, and she attempts to eliminate these problems by adopting the framework of the Natural Semantic Metalanguage (NSM) Theory. In short, according to Asano-Cavanagh (2009:850), “*hazuda* implies that while the speaker is certain of a proposition, an alternative meaning or explanation is possible — ‘I think that it can’t be not like this’”.

As we have seen, some controversial issues remain such as the lack of a precise definition of what ‘reliable and firm grounds’ actually means. It is too involved a subject to be treated here in details. However, it appears to be mostly agreed that the primary meaning of *hazuda* indicates that the speaker’s logical judgment is based on some kind of firm grounds, and the secondary meaning of *hazuda* shows the speaker’s realization. Understanding the present situation is a natural consequence after knowing the truth. With this basic understanding, let us investigate the semantic differences between three epistemic markers in Ryukyu, Uchinaa-Yamatuguchi and Japanese.

## 6. Comparison

### 6.1 Semantic properties

In this section, I will explicate the similarities and differences of three evidential/epistemic markers. First, I will claim that *hazu* in Japanese requires as firm grounds as *hazi* in Ryukyu, but *hazu* in Uchinaa Yamatuguchi does not. Let us look at the examples of Japanese and Uchinaa-Yamatuguchi that correspond to (6). Recall that the speaker of (6) could infer the proposition based on his/her knowledge; for example, the fact that the rainy season has arrived, or the dark clouds in the sky portends rain. Both (18a) and (18b) are acceptable, but (18a) needs firm or reliable grounds, whereas (18b) could represent the speaker’s simple guess without having concrete grounds.

(18) a. (Japanese)

*Asita ame ga huru hazuda.*  
tomorrow rain NM fall should  
‘It should rain tomorrow.’

b. (Uchinaa-Yamatuguchi)

*Ashita ame huru hazu.*  
tomorrow rain fall *hazu*  
‘It may rain tomorrow.’

Next, to measure the certainty, let us consider whether or not the adverb *tabun* ‘maybe’ can co-occur with each form. The unacceptability of (19a) indicates the differences between *hazu* in Japanese and Uchinaa-Yamatuguchi. The adverb *tabun* ‘maybe’ does not fit with *hazuda* as in (19a), whereas as the acceptability of (19b) indicates, *tabun* and *hazu* can co-occur in Uchinaa-Yamatuguchi with no semantic conflicts. Similarly *hazi* in Ryukyu is acceptable as in (19c) so long as the speaker has acquired information such as ‘the rainy season is upon us’, or ‘heavy dark clouds are looming above’. However, (19b) does not require even this kind of evidence, based on the fact that it is raining today, or the speaker is merely guessing. In this case, the meaning conveyed in (19b) is rather closer to “I think.” I stated above that *hazu* in Japanese requires as firm grounds as *hazi* in Ryukyu, but *hazu* in Uchinaa Yamatuguchi does not. However, the different acceptability of (19a) and (19c) shows that *hazu* in Japanese does not

co-occur with the adverb such as ‘maybe’, but *hazi* in Ryukyu allows their co-occurrence. This difference might suggest that *hazi* requires the speaker’s belief or certainty rather than some logical grounds; on the other hand, as Japanese *hazu* emphasizes the logical grounds, as we have seen in section 5, the co-occurrence of *hazu* and *tabun* ‘maybe’ semantically causes conflict.

(19) a. (Japanese)

??*Tabun, asita ame ga huru hazuda.*  
 Maybe tomorrow rain NM fall should  
 ‘Maybe It should rain tomorrow.’

b. (Uchinaa-Yamatuguchi)

*Tabun, asita ame huru hazu.*  
 Maybe tomorrow rain fall *hazu*  
 ‘Maybe it will rain tomorrow.’

c. (Ryukyuan)

*juusaNdaree ?acjaa ?ami*  
 Maybe tomorrow rain  
*huiru hazi.*  
 fall-ATTR ASSUM  
*p* = ‘It will rain tomorrow.’  
 EV = Speaker assumes *p*.

Let us consider the example that corresponds to (4). We have already seen in (14) that *hazu* in Uchinaa-Yamatuguchi can be used by simply knowing that Taro likes wine a lot, without any physical evidence such as nearby empty bottles of wine.

(20) (Japanese)

*kinoo Taro ga wain wo zenbu*  
 yesterday Taro NM wine ACC all  
*non-da hazuda.*  
 drink-PAST should  
 ‘Yesterday Taro should have drunk all wine.’

The speaker cannot utter example (20) merely from knowing the fact that Taro likes wine a lot. Another piece of background evidence that logically supports the proposition is necessary; for example, Taro was the only person who drinks wine, or everyone knows Taro is having a hangover right now. Examples (18) – (20) show that *hazu* in Uchinaa-Yamatuguchi does not necessarily require logical grounds as Japanese

*hazuda* does.

Next, I will analyze the difference between *hazi*, *hazu* and *hazuda*. Recall that the secondary meaning of *hazuda* shows the speaker’s realization, from an understanding that the present situation is a natural consequence grounded in the truth. Neither *hazi* in Ryukyuan nor *hazu* in Uchinaa-Yamatuguchi possesses this function, as illustrated (21a) and (21b), which correspond to (16c).

(21) Just after hearing the strike has been still going on.

a. (Uchinaa-Yamatuguchi)

# *Sorenara densya wa ko-nai*  
 then train TOP come-NEG  
*hazu.*  
*hazu*

Intended meaning: Then I understand why the train doesn’t come.

b. (Ryukyuan)

# *?aNshee deNsja-a kuu-N hazi.*  
 then train TOP come-NEG ASSUM  
 Intended meaning: Then I understand why the train doesn’t come.

However, it is interesting to note that by adding a sentence final particle *saa* after *hazu* as in (22a), the acceptability judgment becomes higher. Also by adding *jasa* (a copula *jaN* + particle-*sa*) as in (22b), the sentence becomes acceptable. In this case, *hazi* behaves as a noun, rather than the assumed evidential, which is attached to the predicate. The phenomenon in (22a) implies that the final particle in Ryukyuan, the study of which has been long neglected, needs to be further investigated. Even in this paper, as I mentioned in the footnote 6, I try not to include the final particle to focus on the three evidential/epistemic markers. These features of the language should be studied more as a next step. Furthermore, as shown in (22b), the case in which *hazi* co-occurs with the copula also needs to be explored.

(22) Just after hearing the strike has been still going on.

a. (Uchinaa-Yamatuguchi)

*Sorenara densya wa konai*  
 then train TOP come-NEG

*hazu saa.*  
*hazu FP*  
 ‘Then I understand why the train doesn’t come.’

- b. (Ryukyuan)  
*ʔaNshee densja- a kuu-N*  
 then train TOP come-NEG  
*hazi jasa.*  
 ASSUM COP  
 ‘Then I understand why the train doesn’t come.’

Next, I will provide one more example to show that *hazi* in Ryukyu and *hazu* in Uchinaa-Yamatuguchi behave differently from *hazu* in Japanese. Recall that we have seen that the speaker’s physical sensation, such as fever, is not sufficient grounds to use *hazuda* in Japanese, as in (17) in section 5. It is interesting to see that the examples correspond to (17) of Uchinaa-Yamatuguchi and Ryukyuan, which are both possible as illustrated in (23a) and (23b).

- (23) Knowing the speaker has a mild fever.  
 a. (Uchinaa-Yamatuguchi)  
*Kaze hii-ta hazu.*  
 cold catch-PAST *hazu*  
 ‘(I think I) should have caught a cold.’  
 b. (Ryukyuan)  
*Hanasici kakat-oo-ru hazi.*  
 cold catch-CON-ATTR ASSUM  
 ‘(I think I) should have caught a cold.’

We have already seen that *hazu* in Uchinaa-Yamatuguchi can be used as long as the speaker thinks or believes the proposition expressed. But we have seen that *hazi* needs comparatively firm ground. The acceptability of (23b) suggests that the firm grounds that Ryukyuan *hazi* requires and Japanese *hazu* are different. Perhaps, this phenomenon occurs because *hazi* respects a speaker’s belief rather than logical relations.

## 6.2 Syntactic features of *hazu* in Uchinaa-Yamatuguchi

Although *hazu* in Uchinaa-Yamatuguchi and *hazu* in Japanese are phonetically and morphologically the same, their syntactic

properties are strikingly different. In this section, I will provide analysis of their differences. The major difference is the place of the copula-*da*, which is attached before *hazu* in the case of Uchinaa-Yamatuguchi as in (24); on the other hand, the copula -*da* is attached to the end of *hazu* in Japanese as in (22) above. Fujiki states that the speaker of (24) does not actually know which way to go; thus, he uses *dahazu* with a measure of uncertainty (2004:32).

- (24) A: Which way would like to go?  
 B: *Tabun migi da-hazu.*  
 maybe right be-may  
 ‘‘Maybe right.’’

(Fujiki 2004:32)

The Japanese copula-*da* is used to assert the proposition expressed; *hazuda* means the speaker asserts his/her assumption. But in the case of Uchinaa-Yamatuguchi, would the scope of *hazu* or function of *da-* be different from those in Japanese? Ichihara argues that the construction of ‘‘X *dahazu*’’ in Uchinaa-Yamatuguchi corresponds to ‘‘X *nahazu*’’ in Japanese (2006:5). According to her analysis, Okinawan high school students tend to use *dahazu* to convey strong inference or one’s opinion, while *nahazu* is used to indicate a vague inference or general opinion<sup>10</sup> (Ichihara 2006:12). Thus, the copula-*da* in Uchinaa-Yamatuguchi has undergone change through combined usages among Ryukyuan, Uchinaa-Yamatuguchi, and Japanese.

## 7. Conclusion

This study represents a first attempt to explore epistemic expressions of *hazi* in Ryukyuan, *hazu* in Uchinaa-Yamatuguchi and *hazu* in Japanese. To discuss this topic as a whole is beyond the scope of the short article; however, at least these interesting aspects of the languages are illustrated. Firstly, *hazu* in Uchinaa-Yamatuguchi does not require firm or reliable grounds, whereas *hazi* in Ryukyuan and *hazu* in Japanese do. Secondly, neither *hazi* in Ryukyuan nor *hazu* in Uchinaa-Yamatuguchi possesses the function of ‘realization’, which is used when the speaker understand the logic of causal relations. Thirdly,

*hazi* appears to require the speaker's belief or certainty that derives from available grounds, rather than from logical causal relations.

For further study, a detailed investigation of the interrelations of tense and each marker needs to be done. Also whether or not *hazu* alone and *hazu* with *da* in Uchinaa-Yamatuguchi convey different meanings should be also addressed. It would be necessary to pursue further what kind of grounds are necessary for each marker.

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<sup>1</sup> Uchinaa-Yamatuguchi has developed in the process of language contact between Ryukyuan and Japanese. It is called *Ryukyu shin hoogen* 'Ryukyuan new dialect' (Nagata 1996), Ryukyuan Creole Japanese or Ryukyuan Creole (Karimata 2008). Takaesu (2002) classified this hybrid type of variety into three types; Uchinaa-Yamatuguchi, Yamatu-Uchinaaguchi and Uchinaa slang.

<sup>2</sup> According to Izuyama (2005, 2006), Miyako, Yaeyama and Yonaguni have trifurcated evidential systems: direct, inferential and reportative.

<sup>3</sup> In this paper, I use broad transcriptions for Ryukyuan. Instead of using special phonetic symbols, I attempt to utilize simple symbols, basically following the description used in the *Dictionary of Okinawan Languages* (1963).

<sup>4</sup> I apply the convention that Faller (2002) adopts for distinguishing propositional meaning and evidential meaning since I consider that this convention usefully reflects that two kinds of meaning (propositional and evidential) clearly.

<sup>5</sup> The direct evidential is not restricted to eyewitness evidence. As for the detailed discussion of the direct evidential, refer to Arakaki (2013).

<sup>6</sup> In actual discourse, the final particle *doo* frequently appears after *hazi* especially its usage is inference, which does not require firm evidence. The final particle has a function that moderates the certitude. Though this phenomenon is interesting, I will not include it in the data in this study to avoid complexity. Even without it, the meaning the sentence expresses is not changed.

<sup>7</sup> When the speaker acquires the information from the weather forecast, the reportative evidential *-Ndi* tends to be used.

<sup>8</sup> Karimata (2008) presents the morphological and grammatical features of Uchinaa-Yamatuguchi and discusses whether or not this variety should be regarded as Creole and emphasizes the importance of comprehensive description of this variety.

<sup>9</sup> Asano-Cavanagh's interest is mainly focused on clarifying the difference between *hazuda* and other epistemic marker in Japanese *chigainai*. Asano-Cavanagh (2009:849) analyzes 104 examples of these two markers, which appear in seven novels and which she portrayed the meaning of *hazuda* as follows. Whether or not this approach can be useful to the data of Ryukyuan or Uchinaa-Yamatuguchi should be addressed in the future.

(a) I say: I think that it can't be not like this

(b) because I know something about it

(c) I don't say: I know this

<sup>10</sup> In Tonfutugo, the variety used in Amami, the copula-*da* is often omitted especially when *hazu* follows a noun (Long 2013).

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## 証拠様態／認識様態標識の比較研究：琉球諸語・沖縄語における「ハジ」、 ウチナーヤマトウグチ「ハズ」、日本語「はず」に関して

新垣友子

### 要旨

琉球諸語は文法的なカテゴリーとして体系的な証拠様態をもつ。本稿では、沖縄語における間接証拠様態の一つである推測エヴィデンシャル「ハジ」に焦点をあて、ウチナーヤマトウグチの「ハズ」と比較研究をおこなった。両者の共通点・相違点がより明確に理解できるように、日本語の「はず」に関する研究にも言及し、3つの標識がもつ特徴の比較考察をおこなった。その結果、ウチナーヤマトウグチの「ハズ」に比べて沖縄語「ハジ」と日本語「はず」は、推測の根拠が明確であること、また、その根拠の質が異なることが分かった。日本語の「はず」が論理的な整合性を重視するのに対して、沖縄語の「ハジ」は話者の確信度や情報の信頼性に関する判断を重視する傾向が見られた。また、沖縄語の「ハジ」とウチナーヤマトウグチの「ハズ」は日本語の「さとり」の用法を所有していないことが明らかになった。

キーワード:エヴィデンシャルティー (証拠様態)、認識様態標識、直接証拠、推論、伝聞、情報源、さとり