

## Evidentiality, Maximize Presupposition, and Gricean Quality in Okinawan

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**Basic Data:** Okinawan exhibits a three-way evidential contrast with verbs describing past events, as illustrated by the examples in (1), adapted from data in Shinzato (1991):

- (1) a. *wanne=e/'yaa=ya/are=e hanahichi=nu kusui nu-da-n*  
 1S=TOP/2S=TOP/3S=TOP cold=GEN medicine drink-PST-IND  
 “I took the medicine.”
- b. *wanne=e/'yaa=ya/are=e hanahichi=nu kusui num-u-ta-n*  
 1S=TOP/2S=TOP/3S=TOP cold=GEN medicine drink-WIT-PST-IND  
 “He/You took the medicine.” (I saw it happen)
- c. *wanne=e/'yaa=ya/are=e hanahichi=nu kusui nu-dee-n*  
 1S=TOP/2S=TOP/3S=TOP cold=GEN medicine drink-INF.PST-IND  
 “He/You took the medicine.” (It seems)

These examples have one of three verb forms: the simple past (1a), the witnessed past (1b), and the inferential past (1c). The simple past contains no evidential morphology, but as noted by Shinzato, is generally restricted to first-person subjects. The other two forms, by contrast, contain overt evidential morphemes, and are typically incompatible with first-person subjects. For the example at hand, the use of the witnessed past (1b) requires that the speaker actually saw the subject drink the cold medicine. The inferential past (1c), by contrast, is typically used to describe past events that the speaker did *not* witness, but infers from indirect evidence.

**Overview of the Analysis:** I argue that the simple past tense in Okinawan is just that. It encodes no evidential restrictions in its denotation. The restriction against simple past tense with second and third person subjects follows from competition with the two competing evidential past tense forms, which contribute evidential presuppositions (cf. Izvorski 1997, Matthewson et al. 2007, i.a.). With non-first-person subjects, these two competing evidential-marked forms exhaust the space of sufficient evidential grounds for assertion, and the principle of Maximize Presupposition (Heim 1991, Sauerland et al. 2005) in combination with the Gricean Maxim of Quality requires that at least one of them be used. Sentences with first-person subjects, following Garrett (2001), are typically grounded in *ego evidentiality*, which includes knowledge of one’s own actions, and does not depend on perception or inference.

**Semantics:** The formal analysis is set in a event/situation semantics, in which sentences denote properties of eventualities (events or situations). Following Deal (2008), I treat tense morphemes as operating on properties of eventualities, and returning properties of eventualities. I present a simplified semantic treatment here; further details and complications are addressed in the full talk, including motivation for adopting Deal’s eventuality-based semantics for tense. The basic past tense morpheme locates the temporal trace of the verbal event  $\tau(e)$  before the utterance time  $t^*$  (2a). The witnessed (2b) and inferential (2c) past forms combine this basic past tense semantics with additional presuppositions; namely, that the speaker either *perceived* the verbal event take place, or *infers* that it took place. The details of these two evidential relations are explored in detail in the full talk; here, they are left as primitives.

- (2) a.  $[[\text{PST}]] = \lambda P \lambda e. P(e) \wedge \tau(e) < t^*$   
 b.  $[[\text{WIT-PST}]] = \lambda P \lambda e : \text{PERCEIVE}(sp, e). P(e) \wedge \tau(e) < t^*$   
 c.  $[[\text{INF-PST}]] = \lambda P \lambda e : \text{INFER}(sp, e). P(e) \wedge \tau(e) < t^*$

**Pragmatics:** The non-presuppositional entailments of the three tense forms in (2) are identical. Thus, the truth conditions of the sentences in (1), holding the subject constant, are also identical,

modulo the presuppositions. The principle of Maximize Presupposition says that if two forms have identical non-presuppositional entailments, then the form with stronger presuppositions blocks the form with weaker presuppositions. Consider the sentences in (1) with a third-person subject referring to Taro. If the speaker witnessed Taro taking the medicine, this satisfies the presupposition in (2b), and thus licenses the witnessed past form (1b) and blocks the simple past form (1a). Similarly, a context in which the speaker infers that Taro took the medicine (from, say, an empty bottle, improved cold symptoms, medicinal halitosis, or the like) satisfies the presupposition in (2c), thus licensing the inferential past form (1c) and blocking the simple past form (1a).

Maximize Presupposition thus only allows for the use of the simple past in those contexts where the speaker has neither direct perceptual nor indirect inferential evidence for the proposition being asserted. But Gricean Quality requires *sufficient evidence* for the proposition being asserted. For the kind of past tense eventive sentences for which the relevant evidential distinctions are made in Okinawan, this would mean that an assertion would require sufficient evidence that is neither direct perceptual nor indirect inferential. For sentences with non-first-person subjects, I argue that these two categories in fact cover the spectrum of sufficient evidence (in the full talk, I consider reportative evidence, arguing that it either falls under inferential evidence, does not satisfy Quality, or is available as a marked interpretation for simple past sentences described here as deviant). Simple past tense sentences with third-person subjects are thus blocked by a combination of Maximize Presupposition and Gricean Quality. The same holds true for second-person subjects.

Why are first-person subjects not blocked in simple past tense sentences? The answer, following Garrett (2001), is the existence of a third category of sufficient evidence, namely *ego evidence* or self-knowledge. For the data at hand, ego evidence consists of knowledge acquired through first-person action; you know you've done something because you *experienced* doing it (not because you *witnessed* yourself doing it). Such evidence is not available in principle for sentences with non-first person subjects (I consider sentences with first-person objects in the full talk). Ego evidence thus provides sufficient evidential grounds that are not covered by either of the two evidentially marked forms, but this evidence is only available in sentences with first-person subjects. This derives the restriction of simple past tense forms to sentences with first-person subjects.

Why, finally, are first-person subjects blocked with the witnessed and inferential past forms? This final piece of the puzzle requires appeal to an evidential hierarchy (Willett 1988), which following Garrett (2001) is ranked *ego* > *witness* > *inferential*. The basic idea is that marking evidence lower on the scale implicates the non-existence of evidence higher on the scale. Using one of the evidentially marked forms with a first person subject thus implicates the non-existence of ego evidence, which is only compatible with unusual contexts involving inebriation, memory loss, identity crises, and the like (such contexts are discussed in the full talk). In normal contexts, the result is that first person is restricted to occurring with the simple past form, since marking it with one of the other forms would falsely implicate the non-existence of ego evidence.

**Implications:** In Okinawan, the evidentially unmarked simple past form competes with two evidentially marked forms under the three-pronged pressure of Maximize Presupposition, Gricean Quality, and the Evidential Hierarchy. The person restrictions in (1) result from this competition. Crosslinguistically, I argue that these same pragmatic pressures apply to evidential systems in other languages, with differences between languages arising from differences in the evidential inventory of each language. Many languages have forms overtly marking indirect or inferential evidence, with the unmarked form covering both ego and witnessed evidence. In such systems, the morphologically unmarked form is often treated as encoding 'direct' evidence. The analysis of Okinawan evidentiality suggests that these two kinds of evidence should be distinguished, and that evidential restrictions on unmarked forms emerge from pragmatic competition with marked forms.