

Nante/Towa are not Special: Reply to Sawada and Sawada (2020)

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Abstract: This paper is a reply to Sawada and Sawada (2020) that analyzes the present tense used in mirative sentences with *nante/towa*. They argue that *nante/towa* has a property to take a non-tensed proposition and that the present tense under them is different from that in other environments. I present examples against their analysis and argue that the tense in *nante/towa* sentences interpreted in the same way as that in other embedded context except that its evaluation time is pragmatically determined.

1. Introduction

The mirative expressions *nante* and *towa* function as a sentence final particle and trigger an exclamative interpretation. Sawada and Sawada (2020; S&S henceforth) observe a peculiar behavior of tense embedded under *nante/towa*. When a so-called present tensed predicate is embedded under *nante/towa*, it yields a past-oriented interpretation as well as a future one.

(1) Taro-ga paatii-ni ku-ru nante/towa.

Taro-nom party-to come-pres N/T

Future reading: Taro is going to come to the party!

Past reading: Taro came to the party!

S&S assume that the sentence is ambiguous and represent the two readings as shown above. I follow them in the representation of the interpretations, but later argue that this is not a matter of ambiguity. Adding temporal adverbials *asita* ‘tomorrow’ and *kinoo* ‘yesterday’

confirms that the event described by the present tensed predicate *ku-ru* can either be a future or a past one.

- (2) *asita/kinoo Taro-ga paatii-ni ku-ru nante/towa.*
 tomorrow/yesterday Taro-nom party-to come-pres N/T
 Future reading: Taro will come to the party tomorrow!
 Past reading: Taro came to the party yesterday!

They claim that this is surprising since Japanese present tense form *-ru* yields a future interpretation when used with an eventive predicate or a present interpretation with a stative predicate, but not a past one. Consider the following examples.

- (3) a. *asita/*kinoo Taro-ga paatii-ni ku-ru.*
 tomorrow/yesterday Taro-nom party-to come-pres
 Taro will come to the party tomorrow.
 b. *ima/*kinoo Taro-ga paatii-ni i-ru.*
 now/yesterday Taro-nom party-at be-pres
 Taro is at the party now.

Unlike the example (2), the sentences without *nante/towa* are incompatible with the past-oriented adverb *kinoo* ‘yesterday’, showing that the *-ru* form yields only a non-past interpretation.

Observe the following example, however.

- (4) *Hanako-wa [asita/kinoo Taro-ga paatii-ni ku-ru to] it-ta*
 Hanako-top tomorrow/yesterday Taro-nom party-to come-pres
 comp say-past
 Hanako said that Taro would come to the party tomorrow/yesterday.

This sentence has the present tense form embedded under a proposi-

tional attitude verb with the past tense *-ta*, and the embedded sentence is compatible with both past- and future-oriented adverbials. This is because the evaluation time of the embedded present tense is determined not based on the current utterance time but on the matrix event time. In cases like this where a tensed clause is embedded under another clause, the tense on the syntactically higher tense determines the interpretation of the lower tense.

In this paper, I argue that the interpretation of the *-ru* form is the same whether in *nante/towa* sentences as in (1) or in embedded clauses like (4). Unlike the latter case, the *-ru* form in *nante/towa* sentences is unembedded and does not have any higher tense, though. I propose that the evaluation time of tenses can be pragmatically determined and the tense interpretation under *nante/towa* is one such case. This argues against S&S's (2020) proposal according to which the *-ru* form in mirative sentences with *nante/towa* is special in that it is semantically vacuous and that clauses under *nante/towa* denote a tenseless proposition.

I first briefly describe S&S's analysis and then present some counter-examples against it. My proposal is that despite that *nante/towa* sentences like (2) are not embedded under any tensed predicates, the semantics of *nante/towa* forces tenses under *nante/towa* interpreted as if they are embedded.

2. Sawada and Sawada's (2020) analysis

S&S propose a conventional implicature (CI) based analysis for *nante/towa*. They claim that *nante/towa* take a non-tensed proposition *p* and conventionally implicate *p* is true at some time.

- (5) $\llbracket \text{nante/towa} \rrbracket: \langle \langle i^a, \langle s^a, t^a \rangle \rangle, t^c \rangle = \lambda p. p$ is SETTLED in w_e and s_e had not expected that p .

Type i is for time intervals, s for world, and t for truth-values. Superscripts a is for at-issue type and c for CI type. The settledness is defined as follows, where t_0 denotes the utterance time given by the context.

- (6) p is SETTLED iff
- a. p is true sometime before t_0 or,
 - b. p is true at t_0 or,
 - c. p is predicted to be true sometime after t_0 .

They argue that the present tense form under *nante/towa* does not have any semantic content and is a morphological realization of a non-tensed proposition. Thus the sentence embedded under *nante/towa* in (2) denotes a property of times as in the following.

- (7) $\llbracket \text{[Taro-ga paatii-ni ku-ru]} \rrbracket = \lambda t \lambda w. \text{Taro comes to the party at } t \text{ in } w.$

To combine the non-tensed proposition above and *nante/towa*, they use the CI application mechanism of Potts' (2005), as shown below.

- (8)
- $$\begin{array}{c}
 \beta \\
 \bullet \\
 \alpha(\beta) \\
 \swarrow \quad \searrow \\
 \alpha: \langle \sigma^a, \tau^c \rangle \quad \beta: \sigma^a
 \end{array}$$

The semantic computation proceed as follows:

- (9) $\lambda t \lambda w. \text{Taro comes to the party at } t \text{ in } w: \langle i^a, \langle s^a, t^a \rangle \rangle$
-

nante/towa ($\lambda t\lambda w$. Taro comes to the party at t in w): t^c

$\lambda t\lambda w$. Taro comes to the party at t in w : nante/towa: $\langle\langle i^a, \langle s^a, t^a \rangle \rangle, t^c \rangle$
 $\langle i^a, \langle s^a, t^a \rangle \rangle$

By calculating the CI, we predict that the sentence coventionally implicates the following two propositions; (i) the proposition that Taro comes to the party is settled and (ii) the speaker of the sentence had not expected that Taro comes to the party. The at-issue meaning is then calculated by adjusting to the CI meaning.

Some comments are in order. First, in order to settle p , the speaker has to choose one of the three interpretations in (6) as to the temporal interpretation of p . It is not enough that p is true at some point in the timeline, either before, at or after the utterance time. Otherwise, we the analysis makes a wrong prediction about the at-issue meaning. Another comment is about their description of the speaker’s unexpectedness. They say that the speaker ‘had not expected that p ’ (p.332), but they do not specify how to determine the evaluation time of ‘had not expected’. The temporal interpretation mechanism I present in what follows gives a way to predict the time of the speaker’s expectation.

S&S further claim that the same mechanism applies when sentences with *nante/towa* are embedded under predicates like *odoroki-da* ‘be surprising’. This explains that the present tense form under embedded *nante/towa* also has a past interpretation as well as a future or present one depending on the predicates, as shown below.

- (10) a. [Asita/kinoo Taro-ga paatii-ni ku-ru nante/towa] odoriki-da.
 tomorrow/yesterday Taro-nom here-at be-pres N/T surprising-
 pred(pres)
 Future reading: It’s surprising that Taro will come to the party tomorrow.
 Past reading: It’s surprising that Taro came to the party yesterday.

- b. [ima/kinoo Taro-ga paatii-ni i-ru nante/towa] odoroki-da
 now/yesterday Taro-nom party-at be-pres N/T surprising-pred
 (pres)
 Present reading: It's surprising that Taro is at the party now.
 Past reading: It's surprising that Taro is at the party yesterday.

In the following section, I present examples against their analysis, regarding temporal interpretations under *nante/towa*.

3. Data against S&S (2020)

3.1. Stative vs. Eventive Predicates

It is well-known that the present tense form can have a present interpretation or a future one depending on the types of predicates. With stative verbs such as *i-* 'be' it yields a present interpretation whereas it has a future interpretation when eventive verbs such are used. This is illustrated below:

- (11) a. Taro-ga paatii-ni i-ru
 Taro-nom party-to be-pres
 Taro is at the party.
- b. Taro-ga paatii-ni ku-ru.
 Taro-nom party-to come-pres
 Taro will come to the party.

The contrast between stative and eventive predicates when used with the present tense has long been discussed in the literature. I will not go into the precise mechanism of why different interpretations arise depending on the types of predicates. An important observation is that the same stative vs. eventive contrast is observed in *nante/towa* sentences,

as discussed in S&S (2020) and reviewed in the previous section. The relevant examples are repeated below.

- (12) a. Taro-ga paatii-ni i-ru nante/towa
Taro-nom party-to be-pres
Present reading: Taro is at the party!
Past reading: Taro was at the party!
- b. Taro-ga paatii-ni ku-ru nante/towa
Taro-nom party-to come-pres
Future reading: Taro will come to the party!
Past reading: Taro was at the party!

The past reading is common to both stative and eventive verbs. In addition, stative verbs have a present reading whereas eventive verbs have a future one. Although S&S examine these data, they do not incorporate the observed pattern into their analysis. As a result, this stative vs. eventive contrast is not captured under S&S's analysis, where sentences with the *-ru* form under *nante/towa* are treated as tenseless and the choice among the past, present, or future interpretation is random. The semantics of *nante/towa* cannot see inside the proposition they take. This means that their analysis predicts all three readings for both stative and eventive predicates, contrary to the fact.

3.2. *Nante/Towa* with the Past Tense

As S&S observe, *nante/towa* can also embed a past tensed clause. In this case, it yields a past interpretation alone.

- (13) Taro-ga paatii-ni ki-ta nante/towa
Taro-nom party-to come-past N/T
Taro came to the party!

The incompatibility with the future adverbial *asita* ‘tomorrow’ confirms this fact.

- (14) **Asita/kinoo Taro-ga paatii-ni ki-ta nante/towa*
 tomorrow/yesterday Taro-nom party-to come-past N/T
 Taro came to the party yesterday!

S&S realize that this is problematic for their analysis since their semantics of *nante/towa* is incompatible with a tensed proposition. They note a subtle difference between *nante/towa* with the *-ru* form and that with the *-ta* form, however. According to them, *nante/towa* with the *-ta* form like (13) conveys the speaker’s indirectness to the source of information. That is, *nante/towa* with the *-ru* form can be used in any situation whether the speaker experienced the event directly or s/he has only an indirect access to the source of information. On the other hand, sentences like (13) can only be used in the latter situation. They conclude that *nante/towa* used with the past tense is lexically distinct from those they analyze in the paper. They do not propose the denotation of this type of *nante/towa*, though.

I do find a slight difference between the past tense and the present tense under *nante/towa*, but am not sure whether it is totally inappropriate to utter the sentence (13) when I directly see Taro at the party. In section 4, I present a unified semantics of *nante/towa* that is compatible with both tenses.

3. 3. Embedded *Nante/Towa*

S&S argue that embedded *nante/towa* clauses exhibit a main clause phenomenon, claiming that clauses under *nante/towa* are interpreted as if they are unembedded. Embedding predicates they consider are *odoroki-da* ‘be surprising’ and *sinzi-rare-nai* ‘cannot believe’, both of which are present tensed.

- (15) a. [Asita/kinoo Taro-ga paatii-ni ku-ru nante/towa] odoriki-da.
 tomorrow/yesterday Taro-nom party-to come-pres N/T
 surprising-pred(pres)
 Future reading: It's surprising that Taro will come to the party tomorrow.
 Past reading: It's surprising that Taro came to the party yesterday.
- b. [Asita/kinoo Taro-ga paatii-ni ku-ru nante/towa] sinzi-rare-nai.
 tomorrow/yesterday Taro-nom party-to come-pres N/T believe-can-neg
 Future reading: I cannot believe that Taro will come to the party tomorrow.
 Past reading: I cannot believe that Taro came to the party yesterday.

In these examples, the matrix predicates are interpreted relative to the current utterance time. Therefore, it is not clear whether the embedded predicates are interpreted as if they are not embedded or their evaluation time is dependent on the matrix event time.

The following example shows that the tense interpretation under *nante/towa* is dependent on embedding attitude verbs.

- (16) [Taro-ga paatii-ni i-ru nante/towa] sinzi-rare-nakat-ta
 Taro-nom party-to be-pres N/T believe-can-beg-past
 Present reading: I could not believe that Taro was at the party.
 Past reading: I could not believe that Taro had been at the party.

Unlike the examples S&S consider, the main predicate in this example has a past tense. In the present reading, the embedded predicate is in-

terpreted relative to the ‘now’ of the embedding predicate, not with respect to the current utterance time. What I was unable to believe at some past time is that Taro was at the party at that time.

The following example with an eventive predicate also shows the same point.

- (17) [Taro-ga (kinoo-no) paatii-ni ku-ru nante/towa] sinzi-rare-nakata
 ta
 Taro-nom (yesterday-gen) party-to come-pres N/T believe-can-beg-past
 I could not believe that Taro would come to the party (yesterday).

This example can be followed by the following utterance without contradiction, suggesting that *ku-ru* ‘come-pres’ is interpreted with respect to the matrix event time, not with respect to the utterance time of the context.

- (18) sikasi zissai kare-wa ki-ta
 but in.fact he-top come-past
 But in fact he did come.

4. The tense interpretation under *nante/towa*

My proposal is that unlike their appearance, the tense interpretation mechanism of clauses with *nante/towa* such as (2) is similar to the one embedded under tensed propositional attitude verbs. Thus, let us start with the example where the present tense is embedded under a past tensed propositional attitude verb *omow-* ‘believe’.

- (19) Hanako-wa [Taro-ga ku-ru to] omot-ta
 Taro-nom Hanako-nom come-pres comp say-past
 Taro believed that Hanako would come.

As mentioned above, the embedded event time can be past or future with respect to the matrix event time, Hanako's believing time. This is confirmed by adding *kinoo* 'yesterday' or *asita* 'tomorrow' to the embedded clause. It is also supported by the fact that the sentence can be followed by either of the following utterances without contradiction.

- (20) a. sikasi kare-wa ko-nakat-ta
 but he-top come-neg-past
 But he did not come.
- b. kare-ga ku-ru kadooka-wa asu-ni nara-nai-to wakara-nai
 he-nom come-pres whether-top tomorrow-dat become-beg-comp know-neg
 (We) do not know whether he comes or not until tomorrow

I argue that this is not a matter of ambiguity. It is simply due to the tense interpretation mechanism of embedded sentences. The embedded present tense is interpreted relative to the future of the matrix event time (or more precisely the subject's now at the matrix event time), which is in the past with respect to the utterance time of the entire sentence. This means that the embedded event time may be before or after the utterance time.

I assume the following semantics for past and present tenses (Cf. Ogihara 1995, Kusumoto 1999). The semantics of the present tense is simplified and also tentative. I use two different semantics for the present tense, one for eventive predicates and the other for stative predicates.

- (21) a. $\llbracket\text{-ta(past)}\rrbracket = \lambda p \lambda t \lambda w \exists t'. t' < t \ \& \ p(t')(w)$
 b. $\llbracket\text{-ru(pres)}\rrbracket = \lambda p \lambda t \lambda w \exists t'. t < t' \ \& \ p(t')(w)$
(for eventive predicates)
 c. $\llbracket\text{-ru(pres)}\rrbracket = \lambda p \lambda t \lambda w \exists t'. t = t' \ \& \ p(t')(w)$
(for stative predicates)

As I mentioned above, providing an analysis for the stative/eventive contrast in this respect is a topic for another paper, and I will not go into this.

Propositional attitude verbs like *omow*- ‘believe’ takes a proposition which is a set of world-time pair.

- (22) $\llbracket\text{omow-}\rrbracket = \lambda p \lambda x \lambda t \lambda w \forall t' \ \& \ w' \text{ compatible with what } x \text{ believes at } t \text{ in } w, p(t')(w') = 1.$

With this semantics, we correctly predict that the embedded event time is relative future to the subject’s now at the matrix event time.

- (23) $\llbracket\text{Hanako-wa [Taro-ga ku-ru to] omot-ta}\rrbracket = \lambda t \lambda w \exists t'. t' < t \ \& \ \forall t'' \ \& \ w' \text{ compatible with what Hanako believes at } t' \text{ in } w, \exists t'''. t'' < t''' \ \& \ \text{Taro come to the party at } t''' \text{ in } w'.$

When uttered, we specify the evaluation time t_0 and world w_0 by saturating t and w above.

- (24) $\llbracket\text{Hanako-wa [Taro-ga ku-ru to] omot-ta}\rrbracket(t_0)(w_0) = 1 \text{ iff } \exists t'. t' < t_0 \ \& \ \forall t'' \ \& \ w' \text{ compatible with what Hanako believes at } t' \text{ in } w_0, \exists t'''. t'' < t''' \ \& \ \text{Taro come to the party at } t''' \text{ in } w'.$

If we change the tense on the matrix verb in (19) into the present tense as below, the embedded tense is interpreted relative to the speaker’s now at the utterance time of the sentence. As a result, a past-oriented

reading disappears.

- (25) Hanako-wa [Taro-ga ku-ru to] omo-u
 Taro-nom Hanako-nom come-pres comp believe-pres
 Taro believes that Hanako will come.

This is perhaps why S&S claim that the existence of the past reading in *nante/towa* sentences is surprising.

Nante/towa sentences introduce the sense of prior unexpectedness, as observed in S&S. I follow S&S in that it is part of its conventional implicature (CI).

- (26) $\llbracket \text{nante/towa} \rrbracket$: $\langle \langle i^a, \langle s^a, t^a \rangle \rangle, \langle i^a, \langle s^a, t^c \rangle \rangle = \lambda p \lambda t \lambda w \exists t'. t' < t \ \& \ s_c \text{ does not expect } p \text{ at } t' \text{ in } w.$

Unlike S&S's, this semantics does not specify how the tense in clauses under *nante/towa* is interpreted. This enables that *nante/towa* can embed predicates with either a present or past tense.

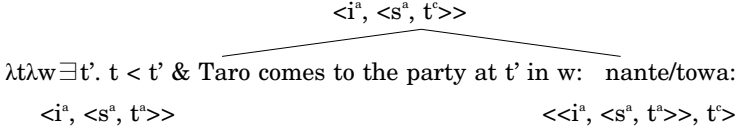
- (27) a. Taro-ga paatii-ni ku-ru nante/towa.
 Taro-nom party-to come-pres N/T
 Future reading: Taro will come to the party tomorrow!
 Past reading: Taro came to the party yesterday!
- b. Taro-ga paatii-ni ki-ta nante/towa
 Taro-nom party-to come-past N/T
 Past reading: Taro came to the party!

Let us first examine the *nante/towa* sentence with a present tense. The semantic computation goes as follows:

(28) $\lambda t\lambda w\exists t'. t < t' \ \& \ \text{Taro comes to the party at } t' \ \text{in } w: \langle i^a, \langle s^a, t^a \rangle \rangle$

•

$\lambda t\lambda w\exists t'. t' < t \ \& \ s_e \ \text{does not expect at } t' \ \text{in } w \ \text{that } \exists t''. t' < t'' \ \& \ \text{Taro comes to the party at } t''$:



When the tense is evaluated with respect to the current evaluation time and world, the CI meaning correctly predict that the speaker’s prior non-expectation that Taro would come to the party.

(29) CI: $\exists t'. t' < t_0 \ \& \ s_e \ \text{does not expect at } t' \ \text{that } \exists t''. t' < t'' \ \& \ \text{Taro comes to the party at } t''$.

What about the at-issue meaning? I argue that the tense embedded under *nante/towa* can be interpreted relative to the past time introduced by the CI. In this case, it is future with respect to a past time, hence it can either be past or future with respect to the utterance time.

(30) at-issue: $\exists t. \underline{t}' < t \ \& \ \text{Taro comes to the party at } t \ \text{in } w_0$.

The underlined time t' in the at-issue meaning above is the same time as t' introduced by the CI in (29).

It may not sound reasonable to assume that an evaluation time is not syntactically nor semantically determined. A similar case is observed in the interpretation of embedded past tense in English, however. Consider the following example, discussed in Abusch (1997).

(31) I know that Mary was a strange child. But her desire to marry a man who resembled her is really bizarre.

The past tense on the verb *resemble* is a case of sequence of tense and it is semantically vacuous. Mary’s desire can be paraphrased as the following direct quotation “I want to marry a man who resembles me.” But unlike typical examples of sequence of tense as in *John said that Mary was sick*, this example has no higher morphological past tense that the past on *resemble* can be anchored to. Abusch claims that the previous context establishes that Mary’s desire under discussion is a past one, and this is enough to license the semantically vacuous past tense on the verb *resemble*.

In the *nante/towa* case under discussion, the CI introduces a past time during which the speaker’s unexpectedness as to Taro’s coming to the party obtains. And this establishes the evaluation time of the present tense in the sentence.

Now let us compute the *nante/towa* sentence with a past tense. Recall that it only yields a past interpretation unlike one with a present tense.

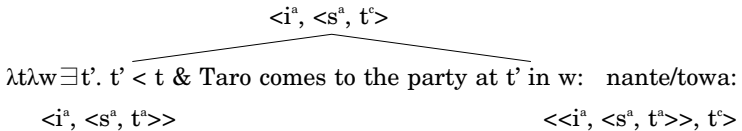
- (32) Taro-ga paatii-ni ki-ta nante/towa
 Taro-nom party-to come-past N/T
 Past reading: Taro came to the party!

The semantic computation proceed as follows:

- (33) $\lambda t \lambda w \exists t'. t' < t$ & Taro comes to the party at t' in w : $\langle i^a, \langle s^a, t^a \rangle \rangle$

•

$\lambda t \lambda w \exists t'. t' < t$ & s_c does not expect at t' in w that $\exists t''$. $t'' < t'$ & Taro comes to the party at t'' :



The CI is calculated based on the semantics of the past tense, hence the unexpectedness is about a past event. The at-issue meaning is interpreted relative to the past time introduced by the CI.

- (34) a. CI: $\exists t'. t' < t_0$ & s_c does not expect at t' in w that $\exists t''$. $t'' < t'$
 & Taro comes to the party at t'' .
 b. at-issue: $\exists t$. $t < t'$ & Taro comes to the party at t in w_0 .

The current analysis borrows insights from S&S (2020) in that the semantic computation of at-issue meanings is dependent on the CI meanings of the same sentence.

5. Predicates embedding *nante/towa*

In this section, we examine cases where *nante/towa* clauses are embedded under predicates like *odoroki-da* ‘surprising’. As noted in S&S, embedded *nante/towa* clauses with the present tense exhibit a similar behavior to non-embedded ones. They are ‘ambiguous’ between a future and past interpretation. They consider examples like the following.

- (35) a. (watasi-ni-wa) [Taro-ga paatii-ni ku-ru nante/towa] odoroki-da
 I-dat-top Taro-nom party-to come-pres N/T surprising-pred
 Future reading: It’s surprising for me that Taro will come to the party tomorrow.
 Past reading: It’s surprising for me that Taro came to the party yesterday.
- b. (watasi-wa) [Taro-ga paatii-ni ku-ru nante/towa] sinzi-rare-nai
 I- top Taro-nom party-to come-pres N/T believe-can-neg
 Future reading: I cannot believe that Taro will come to the

party tomorrow.

Past reading: I cannot believe that Taro came to the party yesterday.

I agree with them that even without the phrase *watasi(-ni)-wa* ‘for me’ the sentence exhibits the unexpectedness with respect to the speaker, and S&S’s analysis correctly predicts this fact. However, the unexpectedness with respect to the speaker can be cancelled, as the following examples show.

(36) a. [Taro-ga paatii-ni ku-ru nante/towa] Hanako-ni-wa odoroki-da

Taro-nom here-at be-pres N/T Hanako-dat-top surprising-pred

Future reading: It’s surprising for Hanako that Taro will come to the party tomorrow.

Past reading: It’s surprising for Hanako that Taro came to the party yesterday.

b. Hanako-wa [Taro-ga paatii-ni ku-ru nante/towa] sinzi-rare-nai

Hanako- top Taro-nom party-to come-pres N/T believe-can-neg

Future reading: Hanako cannot believe that Taro will come to the party tomorrow.

Past reading: Hanako cannot believe that Taro came to the party yesterday.

This may be captured by assuming that *nante/towa* is a context-shifter with respect to the speaker of utterances in the sense of Schlenker (1999). Recall the discussion in section 3.3, however. We observed that the tense interpretation under *nante/towa* is dependent on embedding

attitude verbs. In order to see the point, we examine examples with past-tensed embedding predicates.

- (37) a. [Taro-ga paatii-ni ku-ru nante/towa] odoroki-dat-ta
 Taro-nom party-to come-pres N/T surprising-pred-past
 Future reading: It was surprising that Taro would come to the party.
 Past reading: It was surprising that Taro came to the party.
- b. [Taro-ga paatii-ni ku-ru nante/towa] sinzi-rare-nakat-ta
 Taro-nom party-to come-pres N/T believe-can-neg-past
 Future reading: (I) could not believe that Taro will come to the party.
 Past reading: (I) could not believe that Taro came to the party.

Before going into the detailed analysis, let us examine what predicates can embed *nante/towa* clauses. S&S consider predicates like *odoroki-da* ‘be-surprising’ and *sinzi-rare-nai* ‘cannot believe’. They are predicates that have a sense of unexpectedness by themselves. Other predicates can embed *nante/towa* clauses.

- (38) a. [Taro-ga paatii-ni ku-ru nante/towa] uresi/kanasi-i
 Taro-nom party-to come-pres N/T glad/sad-pred(pres)
 Future reading: (I) am glad/sad that Taro would come to the party.
 Past reading: (I) am glad/sad that Taro came to the party.
- b. [Taro-ga paatii-ni ku-ru nante/towa] meiwaku-da
 Taro-nom party-to come-pres N/T trouble-pred(pres)
 Future reading: It troubles (me) that Taro would come to the party.
 Past reading: It troubles (me) that Taro came to the party.

Past reading: It troubles (me) that Taro came to the party.

There are also cases which are not so clear-cut as to whether they should be analyzed as mirative sentences.

- (39) a. [Taro-ga paatii-ni ku-ru nante/towa] si-ranakat-ta
Taro-nom party-to come-pres N/T know-neg-past
Future reading: (I) did not know that Taro would come to the party.
Past reading: (I) did not know that Taro came to the party.
- b. [Taro-ga paatii-ni ku-ru nante/towa] si-ranakat-ta
Taro-nom party-to come-pres N/T know-neg-past
Future reading: (I) did not know that Taro would come to the party.
Past reading: (I) did not know that Taro came to the party.

It is not clear to me that the above examples have mirative *nante/towa*. The expression *towa* is morphologically a combination of the complementizer *to* and the topic marker *wa*. S&S analyze that *towa* in examples like the following is not a mirative *towa* but a complementizer.

- (40) Taro-wa [Ziro-ga paatii-ni ku-ru towa] iwa-nakat-ta
Taro-top Ziro-nom party-to come-pres comp-top say-neg-past
Taro did not say that Ziro would come to the party.

This is partly because the topic marker *wa* can be dropped and the sentence is still grammatical.

- (41) Taro-wa [Ziro-ga paatii-ni ku-ru to] iwa-nakat-ta
Taro-top Ziro-nom party-to come-pres comp say-neg-past
Taro did not say that Ziro would come to the party.

This is not the case with examples analyzed as mirative expressions. The predicates *odoroki-da* ‘surprising’ and *sinzi-rare-nai* ‘cannot believe’ can take *nante/towa* but not the complementizer *to*.

- (42) a. [Taro-ga paatii-ni ku-ru nante/towa] odoriki-da.
 Taro-nom party-to come-pres N/T surprising-pred(pres)
 Future reading: It’s surprising that Taro will come to the party tomorrow.
 Past reading: It’s surprising that Taro came to the party yesterday.
- b.*[Taro-ga paatii-ni ku-ru to] odoriki-da.
 Taro-nom party-to come-pres comp surprising-pred(pres)
- (43) a. [Taro-ga paatii-ni ku-ru nante/towa] sinzi-rare-nai
 Taro-nom party-to come-pres N/T believe-can-neg
 Future reading: I cannot believe that Taro will come to the party tomorrow.
 Past reading: I cannot believe that Taro came to the party yesterday.
- b.*[Taro-ga paatii-ni ku-ru to] sinzi-rare-nai
 Taro-nom party-to come-pres N/T believe-can-neg

Predicates like *si-ranakat-ta* ‘did not know’ and *omow-anakat-ta* ‘did not think’ allow *nante/towa* as in (39) but can also take the complementizer *to*, as shown below.

- (44) a. [Taro-ga paatii-ni ku-ru to] si-ranakat-ta
 Taro-nom party-to come-pres comp know-neg-past
 Future reading: (I) did not know that Taro would come to the party.

Past reading: (I) did not know that Taro came to the party.

b. [Taro-ga paatii-ni ku-ru to] omow-anakat-ta

Taro-nom party-to come-pres comp think-neg-past

Future reading: (I) did not think that Taro would come to the party.

Past reading: (I) did not think that Taro came to the party.

These examples do exhibit a sense of unexpectedness, though. I will leave open the examination of these cases for future research.

I begin my analysis by comparing the predicate *odoroki-da* ‘be surprising’ and the emotive factive predicate *odorok-* ‘be-surprised’. Consider the following example.

(45) Hanako-wa [Taro-ga paatii-ni kur-u koto-ni] odoroi-ta

Hanako-top Taro-nom party-to come-pres fast-dat surprised-past

Future reading: Hanako was surprised that Taro would come to the party.

Past reading: Hanako was surprised that Taro came to the party.

The embedded clause of this sentence does not have *nante/towa* in its complementizer position but has *koto* ‘fact’ which is often used as a complementizer in factive sentences. Interestingly, this sentence has the same kind of ‘ambiguity’ as *nante/towa* sentence. In the future reading, the sentence can be used to report that Hanako learned yesterday that Taro would come to the party tomorrow. It can also be used to report Hanako’s surprise yesterday at the party when she saw Taro there.

As the verb *odorok-* takes an individual argument, I assume that the predicate *odoroki-da* also takes an individual argument. This explains that *odoroki-da* can express unexpectedness of people other than the speaker of the utterance, as in (36). The following is the semantic

denotation of the predicate *odoroki-da*.

$$(46) \llbracket \text{odoroki-da} \rrbracket = \langle \langle i^a, \langle s^a, t^a \rangle \rangle, e^a \rangle, \langle i^a, \langle s^a, t^c \rangle \rangle = \lambda p \lambda x \lambda t \lambda w \exists t'. \\ t' < t \ \& \ x \text{ does not expect } p \text{ at } t' \text{ in } w.$$

This means that unlike unembedded *nante/towa* cases analyzed above, embedding predicates introduces the sense of unexpectedness as a CI meaning and that embedded *nante/towa* works as a complementizer.

The interpretation of embedded tenses proceeds in the same way as simple *nante/towa* sentences. Their evaluation time may be the past time of unexpectedness introduced by the CI meaning.

6. Concluding remarks

This paper argued against Sawada and Sawada's (2020) analysis of the temporal interpretation of mirative *nante/towa* sentences. I proposed that the present tense *-ru* form in *nante/towa* sentences has the same interpretation as used in other non-mirative sentences. A seemingly peculiar behavior of tense interpretation in mirative sentences comes from the pragmatic mechanism of determining the evaluation time of tenses. The current analysis has an advantage in that it can explain the distribution of tenses in *nante/towa* sentences in a unified way.

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