

*A relevance-based analysis of hearsay particles: Japanese utterance-final tte**

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1 Introduction

Some languages have a system for expressing different types of evidence. For example, Tuyuca, which is spoken in Brazil and Columbia, has an evidential suffix on the verb indicating the kind of evidence the speaker has for what he says (Barnes 1984). She describes a system of five evidentials - 'visual', 'non-visual', 'apparent', 'second-hand' and 'assumed' - of which 'visual' is the strongest kind of evidence. Evidentials include quotative or hearsay markers and in languages such as Hixkaryana (Derbyshire 1979) and Nambiquara (Lowe 1972), utterances have to be marked with a hearsay device when they are based on what the speaker has heard.

Similarly Japanese has a fairly elaborated evidential system and in this paper I will be concerned with linguistic expressions of hearsay evidence, particularly Japanese Sentence-final particle *tte* - a colloquial version of the complementizer *to* - whose meanings are, according to the National Language Research Institute (1951), reporting and echoing. I will give a unified account of its function in which my definition of hearsay explains the various aspects of its meaning including reporting and echoing.

Japanese Grammarians (e.g. Watanabe 1968) agree that sentence-final particles do not contribute to the proposition expressed by the utterance, i.e. its truth-conditional content, and I shall go along with this. Unlike evidential adverbials such as *evidently*, *apparently*, *allegedly* these particles do not encode concepts. Nevertheless, *tte* clearly does encode some sort of information which affects interpretation: I shall argue that its meaning is procedural and constrains the construction of a higher-level explicature.

Tte and *to* can be used utterance-medially to embed a complement clause. In such a case, they are complementizers and do not have a feel of hearsay. This is not surprising as a hearsay particle marks that the proposition expressed by the utterance as a whole is second-hand information and it helps the hearer to recover the higher-level explicature of the utterance which expresses the evidential status of the

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proposition expressed. Embedded sentences or clauses, on the other hand, are obviously not explicated in this way (Wilson 1994).

Identifying the information encoded by *tte* can shed light on the adequate description of the nature of hearsay particles more generally as well as on their adequate explanation. I will use notions introduced by Relevance theory (Sperber & Wilson 1986; Wilson & Sperber 1993) and show that this framework does enable a convincing description and explanation of the nature of the hearsay particle *tte*.

2 Hearsay as an indicator of diminished speaker commitment

It has been argued that the main function of a hearsay particle is to indicate diminished speaker commitment to the truth of the proposition expressed (Palmer 1986; Chafe 1986). That is, a hearsay element is treated as a case of an evidential which indicates the kind or amount of evidence the speaker has for her utterance. Hearsay marks that the utterance is based on second-hand information, i.e. the speaker says what she has heard and might not herself have direct evidence for. For example, (1) can communicate the speaker's limited commitment compared with its counterpart which is not appended with *tte*.

- (1) Mary wa kashikoi *tte*.
'Mary is smart, *I hear/so I'm told*.'

However, the speaker might be attributing the utterance to an authority in whom she has absolute trust, though she has no direct evidence of her own, and could thereby communicate her own high speaker commitment. As an evidential treatment would correctly predict, the speaker could indicate that she has reliable evidence for her utterance. For example:

- (2) According to her teacher, Mary is smart *tte*. I always knew it.
(3) According to the weather report, it is sunny today *tte*. I knew it would be.

So a hearsay particle itself does not indicate a particular degree of speaker commitment. A reliable source of evidence is expressed in 'according to...' phrases in (2) and (3): i.e. it is not the hearsay particle *tte* that indicates this. And the speaker's varying levels of commitment (weak and strong) are communicated in the *tte*-appended utterances (1) and (2)/(3), but, again, this is not what *tte* itself linguistically encodes. Different degrees of speaker commitment are contextually

inferred with the help of *tte* indicating that the proposition expressed is second-hand information. So Palmer's claim that the main function of hearsay is to indicate a diminished speaker commitment is descriptively inadequate.

The hearsay function is standardly analysed as non-truth-conditional (Chafe 1986; Palmer 1986): that is, it does not contribute to the proposition expressed by the utterance. So (1) is true if and only if Mary is smart. This is in accord with Japanese Grammarians' standard claim that sentence-final particles do not contribute to the truth-conditional content of an utterance (e.g. Watanabe 1968). Then what is the function of *tte* if not contributing to the proposition expressed, and how is it explained? In the following sections, I will use Relevance theory ideas to describe and explain the function of this hearsay particle.

3 Utterance-final *tte* and attributive use

According to a study done by the National Language Research Institute (1951: 74-5), *tte* is used when introducing or reporting someone's speech (pretty much standard hearsay usage) or when echoing back a part or whole of the immediately preceding utterance. For example, (1) as a reply in (4) and (5) illustrates these usages. (4)B is a reporting use and (5)B is an echoic use: i.e. (4)B reports the teacher's speech and (5)B echoes a part of the immediately preceding utterance.

- (4) A: What did Mary's teacher say?
 B: Mary wa kashikoi *tte*.
 'Mary is smart, *she says*.'
- (5) A: Our teacher said that Mary is smart.
 B: Mary wa kashikoi *tte*!
 'Mary is smart, *did she say that?* Goodness!'

Now (1) (= (4)B, (5)B) can also have the interpretation given in (6) which shows that *tte* can be used when echoing a past utterance of the speaker herself.

- (6) 'She is smart, *did I say that?* Goodness!'

In Itani (1991) I argued that *tte* marks the Relevance-theoretic notion 'attributive' use, a sub-case of 'interpretive' use. According to Sperber & Wilson (1986), propositional forms can be used to represent either a state of affairs in the

world or to represent other propositional forms. In the former case, which Sperber & Wilson (1986) call 'descriptive' representation, the relation between the representation and what is represented is truth-conditional. In the latter, which Sperber & Wilson (1986) call 'interpretive' representation, the relation is one of logical resemblance, i.e. the sharing of analytic and contextual implications.

In Sperber & Wilson's framework, every utterance is an interpretation of a thought of the speaker's, in the sense that the propositional form of the utterance is intended to resemble the propositional form of the thought communicated to a greater or lesser degree. However, some utterances are 'interpretive' in a second order way, in that the thoughts they 'interpret' are themselves 'interpretations' of other thoughts or of utterances.

In Relevance Theory, this second order interpretation, called 'interpretive use', characterizes, on the one hand, the use of language in reported speech and echoic utterances, and on the other, the meaning encoded by interrogatives and exclamatives.

Blass (1989: 325) argues that the particle *re* in Sissala marks this second order interpretation as it is used under verbs expressing propositional attitudes such as belief and desire, in questions and answers to questions, and in ironical utterances as well as to indicate hearsay evidence. So she analyses this so-called hearsay particle as an 'interpretive use' marker.

I showed in Itani (1991) that *tte* has a narrower range of functions than *re* and encodes a sub-case of this second-order interpretation: i.e. it is used in reported speech and echoic utterances but not in interrogatives and exclamatives. The utterances (4)B, (5)B, (1) and the interpretation in (6) are cases in point. They are a sub-case of the second order interpretation. i.e. they all involve the 'attributive' aspect of language use.

The propositional form of (1) does not describe a state of affairs but 'interprets' the propositional form of a thought or an utterance attributed to someone other than the speaker (e.g. (4)B (5)B), or the speaker in the past (e.g. (6)). However, in Itani (1993), where I compare *tte* with another particle *ka*, I found that *tte* was narrower still and had to be reanalysed as marking a sub-set of types of 'attributive use', and this analysis seemed to reveal the intrinsic nature of hearsay particles.¹ In the following section, I will pursue this analysis.

¹Here I am restricting my argument to the case of hearsay PARTICLES, which are standardly analysed as not contributing to the proposition expressed by an utterance. English hearsay ADVERBIALS, on the other hand, such as *reportedly* and *allegedly*, have been shown by Ifantidou-Trouki (1993) to contribute to truth-conditional content.

4 Hearsay particles and attributive use

(1) with the interpretation (5)B and (6) (repeated as (1)' below) and the following (7) are cases of echoing, the second usage listed by the National Language Research Institute (1951). On a Relevance-based analysis, 'echoic use' is a sub-case of 'attributive use' with the crucial characteristic that it involves an expression of attitude by the speaker to the original utterance.

- (1)' Mary wa kashikoi *tte!*
'Mary is smart, *did she say that?(for (5)B)/did I say that?(for (6))* Goodness!'
- (7) Oh, so it can remove any stain *tte.*
(Expressing the speaker's disgust at the overstated claims made for the new product (adapted from Itani (1991)))

However, there is a crucial restriction on the sort of echoic utterances *tte* can be attached to. It can mark direct/indirect speech and paraphrase, but not implications recovered by inference without actually being heard. So while (7) does not have to be an identical reproduction of the original T.V. commercial *tte* cannot be appended to a contextual implication such as (8) which the speaker might recover from the T.V. commercial.

- (8) So it can remove this wine stain *tte.**

Sperber & Wilson (1986: 238) argue that the 'attributive' aspect of the second order interpretation i.e. interpretation of someone else's utterance/thought, or the speaker's utterance/thought in the past, can achieve relevance in either of the following two ways.

It can achieve relevance by informing the hearer that someone else or the speaker in the past has said something or thinks something as seen in (1) and (4)B, or it can achieve relevance by informing the hearer of the fact that the speaker has in mind what some individual(s) say/think and has a certain attitude toward it. The latter is called 'echoic use' and (1)' and (7) are cases in point.

For example, (1)' echoes what the teacher/the speaker said and the main relevance i.e. the point of the utterance lies, not with reporting what the teacher/the speaker said, but with the attitude of surprise and disbelief the speaker expresses toward it.

Likewise in (7), the utterance echoes what the T.V. commercial has said and its main relevance lies, not with reporting it, but with the attitude of scorn and

disbelief the speaker expresses toward it. This is a fairly typical case of irony. (1)' and (7) can be interpreted as ironical in Japanese even if they are not appended with *tte*, which shows that 'attributive use' does not have to be marked linguistically, i.e. with a linguistic device such as a particle, but may be pragmatically inferred.²

However, this linguistic device indicating 'attributive use' clearly makes it easier for a hearer to infer that a certain utterance does not directly describe a state of affairs, but interprets an attributed utterance, thus increasing the overall relevance of an utterance by reducing the processing effort involved. The English translations of (1)' and (7), on the other hand, would not involve any 'attributive use' marker and the hearer would have to infer this aspect of the intended interpretation without any explicit linguistic clue such as particles.

Now if *tte* does mark all types of 'attributive use' as I argued in Itani (1989/1991) and if Sperber & Wilson are correct that ALL cases of irony are echoic, then it should be possible for all ironical utterances to be appended with *tte*. However, as I argued in Itani (1993), this is simply not the case. In addition to (8) above, consider the following:

- (9) *Ii ten o torimashita tte.**
'So you've scored a good mark, *tte*.'
(As a teacher hands back a badly scored exam to her pupil (adapted from Itani 1993))
- (10) This is a lovely party *tte.**
(When the speaker intends to communicate that the party is boring)
- (11) You can tell he is upset *tte.**
(Coming upon a customer complaining in a shop, blind with rage and making a public exhibition of himself (Wilson & Sperber 1989/1992))

(9)-(11) without *tte* would be perfect ironies in which the speaker dissociates herself from the proposition echoed and is expressing her disapproving attitude toward it. The proposition expressed in (9)-(11) is not used to describe a state of affairs, but is interpretively used to represent an attributed thought, according to

²Linguistic devices certainly include intonation and there might exist a certain type of intonation associated with the kinds of attitude the speaker conveys in irony. However, here I take linguistic devices to mean those that encode a certain type of information, whether it is a concept, or a non-truth-conditional indicator of 'attributive' use. It is unlikely that a certain intonation solely encodes irony but nothing else, as irony can be expressed in various ways with various attitudes, i.e. subtly, obviously, in an exaggerated way and so on, which are standardly accompanied by different tones of voice and intonation.

Sperber & Wilson, where the thought concerned may be a social norm or general hope or expectation that people tend to have, i.e. it need not have been verbally expressed.

If *tte* marks all types of 'attributive use', (9)-(11) should be acceptable but the fact that they are not indicates that *tte* is restricted, as argued in Itani (1993), to the hearsay function. What is this 'hearsay function'? Blass (1989: 300) discusses the minimalist position which says that hearsay particles should be used only for reporting actual utterances; reported thought would be excluded. She goes on, however, to show that *re* in Sissala has a much broader range of functions and could be appended to all the irony cases above.

It seems, though, that *tte* conforms with the minimalist hypothesis: it can only be appended to utterances whose propositional forms are attributed directly, not to thoughts, but to utterances, whether spoken or written. In (9)-(11) the propositional forms represent attributed thoughts which the speaker dissociates herself from, and they have never been heard in the past, i.e. they are not attributed to utterances. The standard understanding of hearsay is that it is a kind of indirect evidence: i.e. the utterance is what the speaker heard or what someone or the speaker in the past said. A definition of hearsay particles can nevertheless be built around the Relevance notion of 'attributive use'. I claim that the main function of a hearsay particle is to indicate that the propositional form of an utterance is attributed to an utterance of someone else or the speaker in the past, i.e. it is 'quotative'. Whether the utterance achieves relevance as a reported speech or as an echoic utterance is a matter which is determined pragmatically. What *tte* itself encodes is that the utterance it is attached to is based on another utterance. Along this line of analysis, the unacceptability of (9)-(11) can be explained as follows: i.e. the hearsay particle *tte* is appended to utterances whose propositional forms are directly attributed to someone's thoughts, but not to their utterances, and so there is a conflict with the encoded content of *tte*.

This definition of a hearsay particle naturally accounts for the straight case of reported speech, i.e. one of the ways the second-order interpretation achieves relevance. Let us consider (4) again:

- (4) A: What did Mary's teacher say?
B: Mary wa kashikoi *tte*.
'Mary is smart, *she said*.'

The function of *tte* in (4) is to indicate that the propositional form does not describe a state of affairs, but represents another propositional form which is

attributed to the teacher's utterance. And it achieves relevance by informing the hearer that the teacher has said that Mary is smart.

In this section, I have argued that the function of a hearsay particle is to indicate that the propositional form is attributed to an earlier utterance. I have shown that this definition explains straightforward cases of hearsay, reported speech, and certain echoic utterances, including certain types of irony i.e. those which involve the echo of an earlier utterance. This supports the Sperber & Wilson's unified account of irony in terms of echoic use.

Tte is the colloquial version of *to* which is used utterance-medially and is standardly analyzed as a predicate-complementizer (Nakau 1973 Josephs 1976). Indeed, it could be argued that (4)B is elliptical utterance and 'Mary's teacher said' has to be recovered as part of the proposition expressed. Then, *tte* itself would be a predicate-complementizer.

In the following section I will look into the predicate-complementizer *to*, as the analysis of *to* also applies to utterance-medial *tte* (though the level of formality differs). I hope this may give further insight into the analysis of utterance-final use of *tte* and point to you possibility of a unified account of the final and medial uses.

5 Utterance-medial use of *to*

Kuno (1973) argues that *to* is a predicate-complementizer and is used mainly with non-factive predicates or verbs. It is contrasted with noun-complementizers such as *koto* and *no*. According to this line of analysis, for example, while *to* can be used in (12) where a non-factive verb 'omou' (= think) is used, it will not be used in (13) where a factive verb 'shiru' (= know) is used.

- (12) Mary wa kashikoi *to* omou.
 Mary topic smart predicate-comp. think
 'I think *that* Mary is smart.'
- (13) Mary wa kashikoi *koto/no* o shi-tteiru.
 Mary topic smart noun-comp. o-accusative know-ing
 'I know Mary's *being* smart.'

However, Kuno (1973) also mentions that there are a number of Japanese verbs such as 'kiku' (= hear) which are indifferent to factive and non-factive paradigms and so they can occur with both *to* and *koto/no*. For example,

- (14) Mary is smart *to* ki-iteiru.
pre-comp. hear-ing
'I hear *that* Mary is smart - she might or might not be so.'
- (15) Mary is smart *koto/no* o ki-iteiru.
noun-comp. acc. hear-ing
'I hear Mary's *being* smart, which she is'. (adapted from Josephs 1976: 316)

The choice between *to* and *koto/no* results in a subtle difference in meaning, which is reflected in the English translations above (Josephs 1976: 316) and might lead me to argue that *to* encodes that its complement clause expresses a proposition that is not factive. However, as expected from the argument in Section 2 concerning the utterance-final use of *tte*, the speaker's commitment to the truth of the proposition that Mary is smart can be a strong one if we add 'from her teacher' as seen in (16).

- (16) A: Is Mary smart?
B: Un soo-da yo.
yes so-is s.f.p.-assertive
Sensei kara mo Marii wa kashikoi *to* ki-iteiru.
teacher from also Mary topic smart pre-comp. hear-ing
'Also from her teacher I hear *that* Mary is smart - and she is.'

In (16), B believes the truth of the proposition that Mary is smart and in order to provide strong evidence for her view, she is reporting the teacher's view. In such a context, the non-factivity of the complement clause which is felt in (14) is not communicated; rather, the speaker resorts to authority and her sureness of the factivity of the complement clause is communicated. This means, as argued with utterance-final uses of *tte*, the non-factivity of complement clauses associated with *to* is not semantic, i.e. is not a linguistic meaning which *to* encodes, but is one of the contextual implications which would be frequently derived.

It would be misleading to use *to* (instead of *koto/no*) when the speaker is sure about Mary's smartness, as argued by Kuno (1973). When the speaker knows that Mary is smart, it is usually odd to say that she hears so, because this would explicitly express that the information is second-hand, and communicate in many contexts an implication that the speaker does not have direct evidence for its truth. So it is usually unacceptable contextually, but it is acceptable semantically, as (16) shows.

If *to* does not encode [-factive], this particle should also be able to be used in certain circumstances with factive verbs such as 'shiru' (= know). Indeed we can modify (13) slightly as in the following and then this becomes acceptable.

- (17) *Watashi wa sensei kara ki-iteiru node, Marii ga kashikoi to shi-tteiru yo.*
 I topic teacher from hear-ing as, Mary subject smart pre-comp. know-ing s.f.p-assertive
 'Because I've heard from the teacher, I know *that* Mary is smart.'

To was originally a particle for reporting someone else's statement (Kuno 1973: 215). However, as the examples above show, *to* is not only used with verbs of reporting but with all sorts of factive and non-factive predicates. So it can well be analyzed as a predicate-complementizer syntactically as many linguists do (Kuno 1973 Nakau 1973 Josephs 1976 etc.). Likewise, utterance-medial *tte* - the colloquial version of *to* - can be analyzed as a predicate-complementizer: i.e. *to* can be replaced with *tte* in (12), (14), (16) and (17). And some of the utterance-final uses of *tte* such as (4) might turn out to be cases of a predicate-complementizer, too, if the ellipsis analysis alluded to in the previous section can be maintained.

In the rest of this paper I will pursue a semantic analysis along the line of Relevance theory, which is compatible with the syntactic analysis of *to* as a predicate-complementizer. I will see if the analysis applied to the utterance-medial use of *to* meshes with the utterance-final use of *to* (used only among older generation) or *tte*.

As was argued in the last section, in utterance-final uses *tte* communicates hearsay and conveys that the proposition expressed by the utterance has been uttered in the past and heard by the speaker directly or indirectly (or entertained by the speaker as will be argued in Section 8). The same thing can be said of *to* - the less colloquial version of *tte*.

Now the question is why is it that the utterance-final use of *tte* or *to* always has an element of hearsay while this element in their utterance-medial use in examples such as (12) and (17) is not felt to be present? This would obviously lead one to assume that the utterance-final *tte* encodes meaning which its medial use does not. However, I hope to show there is a common semantic core to both of these uses. I will come back to this matter in Section 10. In the following section, I will introduce another common use of *to*, *to-yuu*.

6 The meaning of *to-yuu*

To-yuu consists of 'to' (= predicate-complementizer discussed in Section 5) and 'yuu' (= say) and it literally means '... that says...'. It can be used utterance-finally as seen in (18):

- (18) Hitobito wa Mary wa kashikoi *to-yuu*.
 people topic Mary topic smart *that say*
 'People say that Mary is smart.'

It is, however, often used utterance-medially and analyzed as a noun-complementizer (Joseph 1976; Nakau 1973 etc.). In this section, I will only discuss utterance-medial uses as a noun-complementizer.

Josephs (1976: 359) assumes that "*to-yuu* connotes varying degrees of doubt on the part of the speaker that the embedded proposition (i.e. the noun complement) is true" and that "it has an inherent meaning that is essentially non-factive". Furthermore, he argues that the anomaly of the factive noun-complementizer *koto* used with non-factive predicates such as 'utagawashii' (= is doubtful) and 'machigaida' (= is mistaken) can be resolved by the addition of *to-yuu*. So we have the following example:

- (19) Marii ga kashikoi *to-yuu koto/koto** wa utagawashii.
 Mary sub. smart n-comp/n-comp topic doubtful
 'That Mary is smart is doubtful.' ('The fact that Mary is smart is doubtful.')
 (modeled on Josephs 1976: 359-60)

It has to be noted here that although *to-yuu* is analysed as a noun-complementizer which is associated with non-factivity (Nakau 1973), the use of *to-yuu* alone without *koto* (= fact) would be anomalous syntactically in (19). It has to have an antecedent all the time as *to-yuu* alone cannot form noun clauses. Instead of *koto* we can have 'shirase' (= news) or 'houkoku' (= report) as antecedents in (19). So *to-yuu-koto*, not *to-yuu* nominalizes the clause that Mary is smart, and the internal structure of *to-yuu koto* would be something like [TO-YUU [KOTO]n]comp.

Now we can use *to-yuu koto* in examples such as (20) in which factivity of the noun clause is established as it is predicated with factive verbs such as 'shiru' (= know). In (20) the use of *to-yuu* does not make the factivity of *koto* non-factive as was assumed in (19), or create a [+ factive], [- factive] contradiction.

- (20) Mary ga kashikoi *to-yuu koto* wa yoku shi-tteiru.
 Mary sub. smart. n-comp. topic well know-ing
 'I know full well (the fact) that Mary is smart.'

So the points made about the predicate-complementizer *to* apply also to the noun-complementizer *to-yuu*. That is, the inherent meaning of *to-yuu* is not non-factivity. The non-factive understanding arises contextually. In (19), for instance, the

non-factive connotation of the noun clause is due to the non-factive predicate 'utagawashii' (= is doubtful), and this goes well with *to-yuu* which is indifferent to factive/non-factive paradigms, and in this case associated with non-factivity.

In (20), on the other hand, the proposition expressed by the noun clause is understood as factive but this factivity arises on the basis of the semantics of elements other than *to-yuu*, i.e. due to the factive verb 'shiru' (= know). And again, this is totally compatible with the use of *to-yuu* which can nominalize factive and non-factive clauses given an appropriate antecedent noun, and can be used with factive and non-factive predicates.

To-yuu and the colloquial version *tte-yuu* have the literal meaning '...that says...', and apart from *koto* which means 'the fact', they are mostly used with head nouns designating messages or forms of communication such as 'shirase' (= news) and 'houkoku' (= report) (Alfonso 1966: 1155-60). This seems to be further evidence for *to*, or the colloquial version *tte*, being a particle for reporting someone else's or the speaker's previous speech.

What still remains to be accounted for is the use of *to* or *tte* with verbs not designating communication, as in examples (12) and (17), i.e. cases where the hearsay element seems to have been lost. I shall return to this issue. In the next section I will consider the kind of contribution that *tte* makes to the information conveyed by an utterance; I will argue that its role is one of constraining the recovery of explicatures in relevance-theoretic terms.

7 *Tte* and higher-level explicature

An utterance is considered to have only one identifiable propositional form (= the truth-conditional content)³, but it can have many explicatures. Sperber & Wilson (1986: 182) define explicatures as communicated assumptions which are developments from a logical form encoded by an utterance. An explicature can be the propositional form of an utterance which is recovered by enriching a linguistically encoded logical form to the point where it expresses a determinate proposition, or can be a further developed one which is recovered by embedding the propositional form

³Wilson & Sperber (1993: 23) express doubt about the long-established assumption that every utterance encodes a single logical form, expresses a single proposition and has a single set of truth conditions. When we talk about THE truth-conditional content of an utterance, we maintain this assumption and therefore any representation to which hearsay particles contribute are analysed as non-truth-conditional aspects of utterance meaning. Although they are not part of THE truth-conditional content of the utterance, they bear their own truth-conditions and they can be true or false in their own right.

under higher-level descriptions of speech act or attitudinal verb type. So (21) might have higher-level explicatures such as (22)-(23).

- (21) A (happily): Mary is smart.
- (22) The speaker says that Mary is smart.
- (23) The speaker believes that Mary is smart.
- (24) The speaker is pleased that Mary is smart.

And (23) might be further elaborated so as to represent the speaker's degree of conviction (very strong, moderately strong, etc.)

I have argued that the utterance-final use of *tte* is essentially quotative and can be appended only to an utterance which was heard by the speaker directly or indirectly at one time in the past. Now I would argue that *tte* contributes to the recovery of a higher-level description such as the following (25), or (25)' where the strength of the speaker's belief has to be further explicated contextually.

- (25) Someone (the speaker in the past) said that Mary is smart.
- (25)' The speaker believes (based on hearsay evidence) that Mary is smart.

When (21) is used to report someone's speech or opinion, a higher-level explicature such as (25) is the assumption which carries the main relevance, i.e. where the point of the utterance lies. When the main relevance lies here and context allows, (25) is likely to be enriched into a more specific content such as 'Peter said that...' etc. Another possible analysis of reporting cases such as (4)B would be that *tte* is a complementizer and the hearer recovers the main clause such as 'Mary's teacher said *that...*' as part of the propositional form of an utterance, i.e. part of the proposition expressed. Then, *tte* would not be functioning as a hearsay particle but a predicate-complementizer which contributes to the truth-conditional content.

On the other hand, when (21) is uttered as a case of echoic use, a range of speaker's propositional attitude including varying degree of commitment may be recovered. In the case of an irony, higher-level attitudinal descriptions such as 'The speaker believes it is ridiculous for someone to say that...' and what follows from it, i.e. 'It is ridiculous for someone to say that...' are contextually recovered considerably enriching the minimal information *tte* encodes. These are the assumptions where the main relevance lies, i.e. which carry the contextual effects and (25), though communicated, is less important.

Let us look again at some of the utterance-medial complementizer cases, such as (26) and (27) which do not communicate a feel of reporting or quoting at all, and where a higher-level description of the sort in (25) is obviously not communicated.

(26) Mary is smart *tte* shitteiru.
'I know *that* Mary is smart.'

(27) Mary is smart *tte* utagawashii.
'It is doubtful *that* Mary is smart.'

Why this is so follows from the definition of higher-level explicature. Higher-level explicatures are recovered by embedding the whole proposition expressed, not a part of the proposition i.e. complement clauses to which *tte* is attached. Wilson (1994) mentions that the English particle *well* encodes some information about the speaker's attitude and argues that the mood indicators of the MAIN CLAUSE such as attitudinal particles and sentence type determine the speaker's propositional attitude. And this speaker's propositional attitude is reflected in the higher-level explicature, to which the complementizer *tte* obviously does not contribute.

Now the speaker's attitudes such as belief and disbelief are expressed to the complement clause as seen in (28) and (29). However, (28) and (29) are straightforward logical implications of (26) and (27) respectively, hinging on the meaning of the main verb and they are not recovered based on the information encoded by *tte*.

(28) The speaker believes *that* Mary is smart.

(29) The speaker does not believe *that* Mary is smart.

Now Japanese is a language which has a grammaticalized evidential system. The main types of evidentiality are reporting someone else's sensations, reporting something which is not knowable and indicating that information was derived via hearsay or inference (Chafe & Nichols 1986: x). In the next section I will turn to the issue of evidentiality.

8 Utterance-final *tte* and evidentiality

Let me now consider (30). (30)B is a standard answer where the answer to the question is the complement of a main verb 'think'. In such a case, *tte* seems to be clearly a complementizer.

- (30) A: What does Mary's teacher think of her?
- B: Mary wa kashikoi *tte* omotte-iru yo.
 Mary topic smart comp. think-ing s.f.p.-assertive
 'She thinks *that* Mary is smart.'
- C: Mary wa kashikoi *tte*.
 Mary topic smart s.f.p.-hearsay
 'Mary is smart, *she thinks/That* Mary is smart.'

Now, as we might expect, we can also have (30)C as a reply to A, a case of using the so-called hearsay particle. In this example, the utterance achieves relevance by informing the hearer that the teacher thinks that Mary is smart. This might appear to be a counter-example to my claim that *tte* attributes utterances, but not thoughts, contributing to the recovery of higher-level explicatures such as (25) or (25)'. The point lies with reporting the teacher's thought in (30)B.

However, the propositional form is attributed to what the speaker must have heard from the teacher directly or indirectly, not to what the speaker B is speculating as to what the teacher is thinking about Mary. Otherwise, (30)B-C would not be uttered in Japanese. The reason that we have hearsay feel from (30)B does not follow from the presence of *tte* but follows from the fact that the speaker is asserting someone else's thinking which is not knowable without her having heard him saying so directly or indirectly. The 'hearsay' element is present due to the utterance-final *tte* in (30)C, on the other hand, which distinguishes this sort of case from (26) and (27).

If A asks B to speculate on what B thinks the teacher thinks of Mary, a natural way of questioning in Japanese is the following way as expressed in English in (31)A, and a natural way to answer this would be (31)B in which the speaker's thinking is explicitly given, or (31)C in which the inferential forms of modals *yoo mitai* etc. readily translated as 'seem', 'look like', 'appear' or left untranslated are used (Aoki 1986). As was mentioned, in Japanese the thought, belief, desire, feeling etc. of others cannot be directly asserted as in English, but must be marked with some evidential indicators (Aoki 1986).

- (31) A: What do you think Mary's teacher thinks of her?
- B: Mary wa kashikoi *tte* omotte-iru *tte/to* omou yo.
 Mary topic smart comp. think-ing comp. think s.f.p.-assertive
 'I think *that* the teacher thinks *that* Mary is smart.'
- C: Mary wa kashikoi *tte/to* omotte-iru-yoo/mitai.
 Mary topic smart comp. think-ing-*seem/appear* (inferential modals)
 'The teacher *seems* to think *that* Mary is smart.'

In (31)B, B has to explicitly give the verb of B's (the speaker's) thinking 'omotte-iru' (=think-ing) as the information on Mary's smartness has never been heard by B and it is a pure speculation of B regarding what the teacher is thinking of Mary. In such a case, the utterance-medial *tte*, as I mentioned, functions as a complementizer and as such does not contribute to the recovery of higher-level explicatures which communicate a feel of hearsay. This is comparable to *tte* used in (26) and (27) where the predicate of the main clause is describing the speaker's propositional attitude and *tte* is used as a complementizer.

It has to be noted however that the utterance can echo a thought of the speaker as well as an utterance of the speaker in the past. Let us consider (32):

- (32) Mary is smart *tte*?! What am I thinking?

(32) shows that the speaker did not have to utter it in order to echo it, i.e. she did not have to utter overtly in the past that Mary is smart. The speaker could echo her own thought and ridicule it. How does this fit with the hearsay/quotative nature of *tte*? Although 'hearsay' evidence for a particular view is indirect evidence, the utterance which provides this evidence has itself been directly perceived (aurally or visually). We all have a kind of direct access to our own thoughts which we do not have to other people's thoughts, so we may consider or think about our own (unuttered) thoughts in much the same way as we may think about other people's utterances. I think it is this that makes the hearsay particle use possible in these cases.

In the case of someone else's unuttered thought, on the other hand, the speaker does not have direct access but can only speculate about what he thinks, and verbs of the speaker's thinking so or inferential modals have to be explicitly used as seen in (31)B-C.

When the speaker utters (30)C, i.e. apparently echoing someone else's thought, the thought must have been expressed at one stage and heard by the speaker directly or indirectly, thereby giving her some evidence for it, and this makes the use of the

hearsay particle *tte* possible. This seems to explain why *tte* can be appended to an utterance attributed to the speaker's thought on the basis of highly accessible information as in (32) but not to someone else's thought directly.

So we have to modify (25) as in the following:

(33) Someone said or the speaker thinks or thought that....

I have said that this particle is considered as not contributing to the propositional form of an utterance, and is therefore non-truth-conditional. Furthermore, it does not map onto a concept but rather constrains the process of inferring the higher-level explicature concerning the speaker's attitude. In the following section I will show how this particle affects the hearer's interpretation.

9 Hearsay particles as procedural constraints on higher-level explicatures

Blakemore (1987: 144) suggests two types of semantics: one is 'procedural semantics' which explains the way linguistic elements constrains the hearer's inference process, and the other is 'conceptual semantics' which explains the way they contribute to the logical form representation of an utterance. The latter contributes to mental representations while the former, to mental computations (i.e. inference processes) that operate on those representations.

I argue that the semantics of the utterance-final *tte* is not 'conceptual' but 'procedural' as it does not map onto a conceptual representation, but directs the hearer's inference processes in constraining the recovery of a certain conceptual representation, i.e. a higher-level representation as is shown in this section.

Let us consider (5) again:

- (5) A: Our teacher said that Mary is smart.
 B: Mary wa kashikoi *tte*?!
 Mary topic smart s.f.p.-hearsay
 'Mary is smart?! *Did she say that?* Goodness!'

In this utterance, the speaker B does not endorse the truth of the proposition that Mary is smart, and the propositional form, though it is enriched to the point where it has a determinate proposition, is not communicated as a true assumption, i.e. is not communicated as an explicature. On the other hand, higher-level explicatures such

as (34) and (35) are assumptions that are communicated to the hearer as true assumptions.

(34) The speaker is surprised that the teacher has said that Mary is smart.

(35) The speaker believes that the teacher has said that Mary is smart.

These are developed from another higher-level explicature (36) which is recovered on the basis of the information encoded by *tte* (i.e. quotative attributive use) and contextual information. And if B trusts the teacher enough, (35) provides evidence for (37). In Relevance theory all of these constitute part of the explicit import of an utterance.

(36) The teacher said that Mary is smart.

(37) The speaker believes (on hearsay basis) that Mary is smart.

This does not mean that *tte*-appended utterances may never have their propositional form communicated to the hearer as a true assumption, i.e. explicated. Let us go back to (2) (repeated below).

(2) According to her teacher, Mary is smart *tte*. I knew she is.

'According to...' phrase is usually considered as not contributing to the proposition expressed (e.g. Prince et al 1982).⁴ In this example, the source of attribution is a trusted authority and the propositional form (38) is communicated as an explicature.

(38) Mary is smart.

This explicature is communicated on the basis of (39) which is a higher-level explicature derived as a result of the contribution made by the attribution phrase 'according to...' and the constraint imposed by *tte*.

(39) The teacher said that Mary is smart.

⁴However, in the light of Ifantidou-Trouki (1993) this view may ultimately have to be revised, since on the embedding tests she uses, the phrase 'according to X' seems (sometimes at least) to contribute to truth-conditions.

As the teacher is a trusted authority, this gives strong evidence for the proposition, and another higher-level explicature (40) in which a more specific description of the speaker's belief is given, is likely to be communicated.

(40) The speaker believes strongly that Mary is smart.

Wilson & Sperber (1993: 22) argue that the content of this type of higher-level representation will have much more specific and richer concepts than simple abstractions such as 'believing that' or 'saying that', and (37) and (40) are cases in point.

My claim, then, is that the Japanese hearsay particle *tte* does not encode any concept which contributes to truth-conditions, but encodes the information that the propositional form is attributed to an utterance or the speaker's thought (i.e. a representation directly accessible to the speaker). This information constrains the sort of higher-level explicatures that are derived.

In (5)B the utterance-final *tte* encodes the information that the propositional form is attributed to an utterance, i.e. in this case the teacher's utterance that Mary is smart, thus constraining the recovery of a higher-level explicature such as (36) where the source of attribution is specified. Further in (2), the utterance-final *tte* constrains the recovery of a higher-level explicature such as (40) to which 'according to the teacher' also contributes.

The higher-level explicatures (34)-(36) and (39) are derived on the basis of the hearsay indicator, *tte*, which in one context leads the hearer to interpret the speaker's weakly believing the proposition expressed; and in another, the speaker's having strong commitment in the proposition expressed. Of course, there are utterances whose source of attribution cannot be recovered contextually. For example, in (1) the information that Mary is smart is based on hearsay evidence but the context does not allow the hearer to recover the source of information (and it is not important). So in such a case *tte* constrains the recovery of a higher-level explicature such as (41).

(41) Someone said that Mary is smart.

In this section, I argued that the utterance-final *tte* has a procedural semantics constraining the recovery of higher-level explicatures. That is, what *tte* encodes is not a conceptual representation such as (33), but a set of clues (i.e. quotative attributive use specified in (33)) for constraining ones, i.e. higher-level explicatures such as (34)-(36), (39) and (41). So it can be characterized as making a direct contribution to inference processes, and this type of semantic information, contextual information and

a pragmatic criterion based on optimal relevance will determine the content of the higher-level explicatures.

10 Conclusions

According to Palmer (1986: 53), hearsay particles are included as a case of evidentials and this seems correct as the source of evidence is what someone has said. Against this, Blass (1989; 1990) has shown that supposed hearsay data from Sissala are better analysed as general markers of 'interpretive use' rather than as restricted to the reporting of actual speech, or as belonging to a modal/evidential system.

The Japanese data, however, show that *tte* favours an analysis of hearsay particles as markers of quotative 'attributive use', over an analysis as markers of 'speaker's diminished commitment' or those of 'interpretive' or perfectly general 'attributive uses'. I claimed that the utterance-final *tte* communicates a feel of hearsay by encoding the procedural information that the propositional form is attributed to an utterance or the speaker's thought, i.e. a quotative attributive use, and by constraining the recovery of higher-level explicatures such as (34)-(36), (39) and (41).

The utterance-medial *tte*, on the other hand, does not constrain the recovery of higher-level explicatures and does not communicate any feel of hearsay. This follows from the definition of higher-level explicatures that they are recovered by embedding the whole proposition, not a part of the proposition such as a complement clause the utterance-medial *tte* marks.

The original meaning of *to* - the more formal version of *tte* - was reporting someone else's statement (Kuno 1973: 215) as shown in (30)B-C, but it is true that the complementizer *tte* in (26) and (27) reports the speaker's thought that Mary is smart. The proposition the complementizer *to* or *tte* marks does not describe the state of affairs in the world, but interprets someone's thought. So we might be able to argue that the complementizer *to* or *tte* marks 'interpretive use'. Indeed Blass (1990: 123) mentions that the English complementizer *that* is a candidate for a interpretive-use marker.

If this line of argument is correct, we could give a unified analysis for both the utterance-medial and final *tte*. That is, *tte* in both the utterance-medial and final uses indicates 'interpretive use': i.e. the complementizer *tte* marks general 'interpretive use' while the utterance-final particle *tte* has a narrower semantics, i.e. indicates attribution to a previous utterance or the speaker's thought which is a quotative attributive use, i.e. a sub-type of 'interpretive use'.

In this paper, I have argued that the utterance-final *tte* linguistically encodes the procedural information i.e. clues for constraining a conceptual representation i.e. a higher-level explicature, together with contextual information and a pragmatic criterion of consistency with the principle of relevance. The semantics of the utterance-final *tte* is not conceptual but procedural, encoding 'quotative attributive use'.

Thus, I analysed *tte* in the Relevance framework, and have hopefully shown that Relevance theory (Sperber & Wilson 1986: Wilson & Sperber 1993) can provide concepts for the description of the semantics of hearsay particles and can explain how this semantics is elaborated pragmatically in context to give a range of interpretations.

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