

## The utterance situation-based comparison in the Japanese degree adverb *motto*

(Category: formal semantics)

**1. Introduction:** It has been claimed in the literature that the Japanese degree adverb *motto* has two kinds of uses: a ‘degree’ use and a ‘negative’ use (e.g. Watanabe 1986; Sano 2004). For example, *motto* in (1) is considered to be a degree use:

- (1) Kono mise-no keeki-wa ano mise-no keeki-yori(-mo) motto oishi-katta.  
 This store-GEN cake-TOP that store-GEN cake-than-MO MOTTO delicious-PAST  
*Degree reading:* This store’s cake was {still much/even} more delicious than that store’s cake.

(1) is used in a positive context where both store’s cakes are delicious, but ‘this store’s cake’ is still much more delicious. In contrast, sentence (2) can be ambiguous between two readings: a degree reading and a negative reading (Watanabe 1985): (Note: if we put a stress on *motto*, a degree reading becomes salient (Sano 2004)):

- (2) Kono mise-no keeki-wa motto oishi-katta.  
 This store-GEN cake-TOP MOTTO delicious-PAST  
*Degree reading:* This store’s cake was still much more delicious than a contextually determined store’s cake.  
*Negative reading:* This store’s cake was delicious. (Implicature: This store’s cake is not delicious now.)

In the degree reading, the sentence is interpreted as an ‘elliptical’ comparison. It is similar to (1) in that the sentence conveys that although the store’s cake and a contextually determined store’s cake are delicious, the given store’s cake was much more delicious. On the other hand, the negative reading does not convey that the store’s cake is delicious. Rather, it implies that it is bad now. As the following example shows, this kind of negative inference can also arise in imperatives and questions:

- (3) Motto oishii keeki-o {tuku-re! / tukur-e-masu-ka?}  
 MOTTO delicious cake-ACC make-IMP/ make-can-perf.HON-Q  
*Degree reading:* Make a still much more delicious cake! / Can you make a still much more delicious cake?  
*Negative reading:* Make a delicious cake! / Can you make a delicious cake? (Implicature: the current cake is not delicious.)

However, the negative reading never arises with the simple present tense:

- (4) Kono mise-no keeki-wa motto oishii. (only degree reading available)  
 This store-GEN cake-TOP MOTTO delicious  
*Degree reading:* This store’s cake was still much more delicious than a contextual store’s cake.

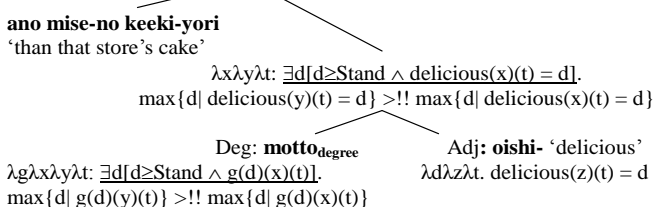
Why can’t the negative *motto* arise in (1) and (4)? Where does the negative inference come from and how can we analyze it? In previous studies of the negative *motto*, it is analyzed as a special kind of contrastive negative marker that conveys that the opposite of the at-issue gradable predicate is true now (cf. Watanabe 1985; Sano 2004). In this paper I argue that similarly to the degree *motto*, the negative *motto* is also a comparative morpheme, but unlike the degree *motto* it is used in an expressive realm. Namely, it anchors to an ‘utterance situation’ and conventionally implicates that the expected degree of a target is much greater than the target’s ‘current’ degree. It will be argued that the negative inference induced by the use of the negative *motto* comes from the large gap between the current degree and an expected degree. This paper shows that there is a mode of utterance situation-based comparison in natural language and that there is a shared conceptual basis between the at-issue meaning (truth-conditional) and the conventional implicature (CI) (non-truth conditional) (cf. the relevance theoretic approach to meaning).

**2. The meaning of degree *motto*:** Let us first consider the meaning of degree *motto*. Based on the standard assumption that a comparative morpheme (MORE) has a comparative meaning, I propose the following denotation for the degree *motto* in (1):

- (5)  $[[motto_{DEGREE}]] = \lambda g_{\langle d, \langle e, \langle i, t \rangle \rangle} \lambda x \lambda y \lambda t: \exists d[d \geq Stand \wedge g(d)(x)(t) = d]. \max\{d | g(d)(y)(t)\} >!! \max\{d | g(d)(x)(t)\}$   
 (where the underlined part is a presupposition)

In prose, the degree *motto* in (5) (i) presupposes that the degree of the standard  $x$  is greater than the contextual standard of a gradable predicate  $g$  at  $t$ , and semantically denotes that (ii) the maximal degree of the target  $y$  is much greater than that of the standard  $x$  on the scale of  $g$  at  $t$ . The inference that ‘both a target and a standard are A’ comes from the presupposition of the standard. The underlined part is a presupposition because it survives even if the sentence with degree *motto* is embedded under logical operators (e.g., modals and question particles), as shown in (6). Figure 1 shows the part of the logical structure in (1):

**Figure 1**



- (6) Taro-wa Ziro-yori(-mo) motto kashikoi-  
 Taro-TOP Ziro-than-MO MOTTO smart-  
 {daroo./no?}  
 will /Q  
 ‘Taro will be still much smarter than Ziro. /Is Taro  
 still much smarter than Ziro?’  
**Presupposition:** Ziro is smart.

The fact that sentence (6) is entirely felicitous according to the *Hey wait a minute!* test for presupposition also supports the idea that the underlined part of (5) is a presupposition. For example, we can naturally utter *Hey wait a minute! I didn't know that Ziro is smart* after (6).

**3. The meaning of negative *motto*:** Let us now consider the meaning of the negative use of *motto*. I argue that similarly to the degree *motto*, the negative *motto* is also a comparative morpheme. More specifically I propose that it denotes that the degree the speaker expects of a particular target is much greater than the current degree of the target (cf. the negation-based approach). Under this view, the negative inference of the negative *motto* is a conversational implicature which comes from a large gap between the speaker's expected degree and the current degree. The idea that the negative implicature is conversational is corroborated by the fact that it is cancellable:

(7) After the negative use of (2) (where *motto* is not stressed)

Maa ima-demo juubun oishii-kedo  
Well now-even enough delicious-though  
'This cake is delicious now, too, though.'

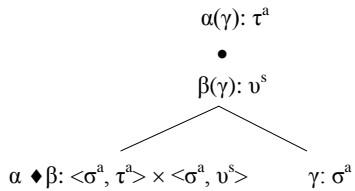
The important point is that the comparative meaning of the negative *motto* is a CI. It is not an at-issue meaning because we cannot challenge the meaning triggered by the negative *motto* by saying 'No, that's not true!' The fact that the negative *motto* does not receive stress/focus also supports the idea that it does not contribute to an at-issue meaning. Furthermore, it is not a presupposition because it is not felicitous to say, 'Hey wait a minute! I didn't know that your expected degree is much greater than the current degree' after a sentence with negative *motto*.

The issue is how we analyze the meaning of the negative *motto* in a compositional way. The problem is that in sentences with the negative *motto*, there are two kinds of scalar meanings, viz. a comparative meaning (at the CI level) and a norm-related positive adjectival meaning (at the at-issue level), and under a standard composition system we cannot compute the two kinds of meanings simultaneously. This is because both kinds of scalar meanings need a lexical meaning for the gradable predicate *g*, but there is only one such gradable predicate in these sentences. This leads us to consider the negative *motto* to be a 'mixed' content (McCready 2010), as shown in (8) (The left side of  $\blacklozenge$  is the at-issue component and the right side of  $\blacklozenge$  is the CI component):

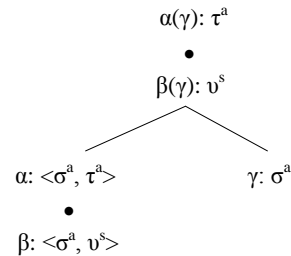
$$(8) \llbracket motto_{NEG} \rrbracket = \lambda g \lambda x \lambda t. \exists d [d \geq Stand \wedge g(d)(x)(t)] \blacklozenge \lambda g \lambda x \lambda t. \max \{d \mid g(d)(x)(t)\} > !! \max \{d \mid g(d)(x)(t_0)\} \\ \text{(where } t_0 = \text{now)}$$

Figures 2 and 3 show the compositional rules for mixed content that involves an operation of shunting (McCready 2010) (Superscript *a* stands for an at-issue type and superscript *s* stands for a shunting type.) Figure 4 shows a part of the logical structure of the negative reading in (2):

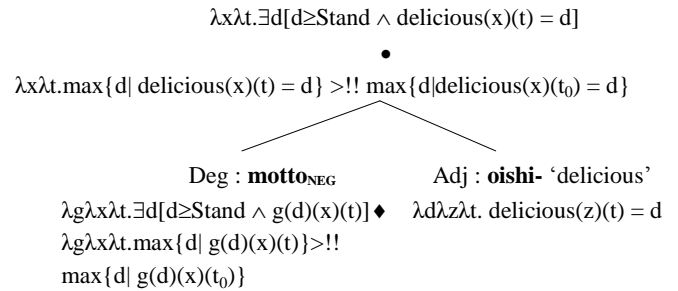
**Figure 2**



**Figure 3**



**Figure 4**



Note that the compositional rules in Figures 2 and 3 are different from Potts's (2005) CI application in that here the mixed contents have a characteristic of resource sensitivity. That is, the argument of a mixed content (i.e.  $\sigma^a$ ) is not passed up to the node above the bullet  $\bullet$ .

**4. Explaining the distribution patterns of the negative *motto*:** Our proposed analysis of the meaning of negative *motto* (= 8) can naturally explain its distribution patterns. The negative *motto* cannot arise in a comparison of two different individuals like (1) because the essence of the negative *motto* is to compare one individual based on two different times (situations). Furthermore, it cannot arise in a simple present tense as in (4) because we cannot make a comparison if there is no contrast between an utterance situation and an alternative situation in terms of time.

**5. Conclusion:** The above discussion strongly suggests that there is a mode of utterance situation-based expressive comparison in natural language where the speaker evaluates the utterance situation based on a comparison with an alternative expected situation in the domain of CI. The theoretical implication is that the notion of intensified comparison at the level of semantics is extended to the level of the CI dimension in a parallel way. This paper argues that the phenomenon of the Japanese degree adverb *motto* strongly suggests that there is a shared conceptual basis between at-issue meaning and a CI (unlike the relevance theoretic view; conceptual vs. procedural (= non-conceptual)).

**Selected references:** McCready, E. 2010. Varieties of Conventional Implicature: Evidence from Japanese. *Semantics & Pragmatics*, 3, 1-57. Potts, C. 2005. *The Logic of Conventional Implicatures*. Oxford University Press. Sano, Y. 2004. "Motto no hiteiteki youhou ni tuite" (On the 'negative usage' of *motto*). *Nihongo kagaku* 15. Watanabe, M. 1985. "Hikaku no fukushi: 'motto' o tyuushinni" (The Comparative Adverbs in Japanese: The Case of *Motto*). *Bulletin of the Language Institute of Gakushuin University* 8.