The Japanese negative *totemo* ‘very’: toward a new typology of negative sensitive items

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1 Introduction
The Japanese intensifier *tutemoto* ‘very’ intensifies the degree associated with a gradable predicate:

(1) a. Kono ie-wa *tutemoto* ookii.  
This house-TOP very big  
‘This house is very big.’

b. Koko-wa *tutemoto* anzen-da.  
Here-TOP very safe-PRED  
‘This place is very safe.’

However, *tutemoto* can also intensify a negative modal statement:

(2) a. Ame-wa *tutemoto* yami-soo{-ni*da}.  
Rain-TOP TOTEMO stop-seem-to NEG/PRED  
‘The rain does not seem to stop.’  
(Implication: I am emphasizing the unlikelihood.)

b. Tetuya-nado *tutemoto* {deki-nai/*dekiru}.  
Staying up all night-NADO TOTEMO can-NEG/can  
‘Staying up all night is impossible.’  
(Implication: I am emphasizing the impossibility.)

In (2a), *tutemoto* emphasizes the negative modal statement, “the rain does not seem to stop.” In (2b), *tutemoto* emphasizes the negative statement, “I can’t stay up all night.” The crucial point of this use of *tutemoto* is that it can only appear in a negative environment (see, e.g., Watanabe 2002). If there is no negation, sentence (2) becomes ill-formed. Therefore, *tutemoto* in (2) behaves like a negative polarity item (NPI).

However, the negative use of *tutemoto* displays several characteristics that typical emphatic NPIs (e.g., minimizer NPIs, *any*) do not show. First, unlike typical

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*I am very grateful to Edith Aldridge, Daisuke Bekki, Andrea Beltrama, Anastasia Giannakidou, Thomas Grano, Martin Hackl, Yusuke Kubota, Eric McCready, Jason Merchant, Harumi Sawada, Jun Sawada, Henriëtte de Swart, Orest Xherija, Masaya Yoshida, Hedde Zeijlstra, and the audience of CLS 52 for their valuable comments and discussions regarding the content of this material. Parts of this paper were also presented at University of Göttingen (2015) and LENLS 11, and I also thank the audiences for their valuable comments and suggestions. This paper is based upon work supported by JSPS KAKENHI Grant Number 26770140. All remaining errors are of course my own.
emphatic NPIs, the negative *totemo* never falls within the scope of negation. For example, in (2a) the negative *totemo* intensifies the impossibility of staying up all night. Second, the negative *totemo* must always co-occur with a modal, which expresses unlikelihood/impossibility.

The following questions will naturally arise from the above observations:

(3) a. What is the meaning/function of the negative *totemo*?
b. Why is it that *totemo* in (2) must appear in a negative context?
c. Why is it that the negative *totemo* must co-occur with a modal?
d. What does the existence of the negative *totemo* suggest for the theories of NPIs/negative sensitive items?

In this paper, I will investigate the meaning and distribution of the negative *totemo* and try to answer these questions.

Regarding the meaning of the negative *totemo*, I will argue that it is not a logical/semantic NPI, which is licensed by negation or downward-entailing/non-veridical operators, such as questions (e.g., Ladusaw 1980; Giannakidou 1998). Rather, it is a conventional implicature (CI)-inducing expression/expressive (e.g., Grice 1975; Potts 2005), which intensifies the unlikelihood or impossibility of a given proposition \( p \) (the proposition without negation or the modal) and “refuses” to update the common ground (the context set) with the at-issue proposition \( p \), although \( p \) is expected prior to an utterance.

As for the question of polarity sensitivity, I will argue that the negative *totemo* can only occur in a negative environment because it presupposes that the maximum probability degree of a gradable modal predicate \( G \) is 0.

With regard to the requirement of co-occurrence with a modal, I argue that the negative *totemo* must occur with modality because it is a degree head that appears above a proposition. The negative *totemo* needs a measure function dimension, and the gradable modal provides it.

The theoretical implication of this paper is that there is a new class of NPIs—expressive NPIs (or more specifically, oppositive NPIs), which are not licensed by logical operators, but require a negative element (as an argument) in order to satisfy its use-condition. This paper suggests a new typology of negative polarity items.

This paper will proceed as follows: in section 2, we will analyze the semantic *totemo* as a starting point. In section 3, we will look at the meaning and use of the negative *totemo* and show that it is an expressive/CI-triggering expression. In section 4, we will analyze its meaning in a formal way. In section 5, we will look at the discourse-pragmatic property of the negative *totemo* in detail and clarify its expressive/oppositional property in terms of information update. Section 6 considers the negative *totemo* from a broader perspective and suggests a new typology of negative polarity items. Section 7 concludes.

2 The meaning of the semantic *totemo*

Before moving to the analysis of the negative *totemo*, let us look at the meaning of the semantic *totemo*:
(4) Kono ie-wa totemo ookii.
This house-TOP very big
‘This house is very big.’

The semantic *totemo* intensifies the degree of an adjective at the at-issue (semantic) level. (Superscript $a$ stands for an at-issue type. This type is used for calculating an at-issue meaning.)

(5) $[[totemo_{SEM}]] : \langle G^a \langle e^a, \langle i^a, \langle s^a, t^a \rangle \rangle \rangle \rangle = \lambda G_{ADJ} \lambda x \lambda t \lambda w \exists d[d \succ !!ST AND \land G(d)(x)(t)(w)]$

In prose, the semantic *totemo* denotes that the degree of target $x$, with respect to the scale associated with $G$, is much greater than a standard at $t$ in $w$. “$\succ !!ST AND$” means “much greater than a standard” (Kennedy & McNally 2005) (cf. Kennedy and McNally’s (2005) analysis of the English *very*).

Compositionally speaking, the semantic *totemo* directly combines with a gradable predicate. As for the meaning of this gradable predicate, I assume that it represents the relationships between individuals and degrees (Seuren 1973; Cresswell 1977; von Stechow 1984; Klein 1991; Kennedy & McNally 2005):

(6) $[[ookii]] : \langle d^a, \langle e^a, \langle i^a, \langle s^a, t^a \rangle \rangle \rangle \rangle = \lambda d \lambda x \lambda t \lambda w. big(x)(t)(w) = d$

The following shows the logical structure of sentence (4):

(7) $\exists d[d \succ !!ST AND \land fun(tennis)(t_0)(w_0) = d]$

As for tense and world I will treat them as pronouns, on a par with individuals (Hacquard 2006; Percus 2000).

Note that in terms of polarity sensitivity, the semantic *totemo* should be regarded as a positive polarity item (PPI). As the following example shows, the sentence with negation sounds odd:
(8) *Kono heya-wa totemo ookiku-nai.
   This room-TOP very big-NEG
   ‘This room is not very big.’

However, if we add a contrastive topic marker wa, the sentence becomes natural:

(9) Kono heya-wa totemo ookiku-wa-nai.
   This room-TOP very big-CONT-NEG
   ‘This room is not VERY BIG.’

Notice, however, that in this sentence, totemo outscopes negation, and the sentence is interpreted as a denial/metalinguistic negation (Horn 1989; Szabolcsi 2004).

3 The negative totemo is an expressive/CI

We now move to the meaning and use of the negative totemo. The main point I would like to make is that, unlike the semantic totemo, the negative totemo is an expressive; it conventionally implicates that a given proposition is extremely unlikely/impossible. In Gricean theory, conventional implicatures (CIs) are considered to be part of the meanings of words, but they are independent of “what is said” (e.g., Grice 1975; Potts 2005, 2007; Horn 2007; McCready 2010; Sawada 2010, 2014; Gutzmann 2012). They are not-at-issue. Furthermore, CI expressions are speaker-oriented (by default) (Potts 2007). In this section, we will provide some evidence for the idea that the negative totemo has the properties of a CI.

3.1 Denial

The first piece of evidence is concerned with denial. As the following example shows, denial cannot target the meaning triggered by the negative totemo:

(10) A: Konnna muzukasii mondai-wa boku-ni-wa totemo
    Such a difficult problem-TOP I-to-TOP TOTEMO
tok-e-nai.
solve-can-NEG
   ‘I can’t solve such a difficult problem.’ (CI: I am emphasizing the im-
   possibility.)

B: Iya, sonna-hazu-nai
   No such-thing-NEG
   ‘No, that should not be right.’ (You are a smart person!)

Here, speaker B is challenging the at-issue part of (10A) (i.e., ‘I can’t solve such a difficult problem’), but not the CI. It would be odd if speaker B were challenging the CI of A’s utterance, because that would mean that he/she is objecting to A’s feeling. Note that the situation becomes quite different in the case of the semantic totemo. The meaning of the semantic totemo can be challenged by saying (11B):
(11) A: Kono hon-wa totemo tumaranai.
   this book-TOP very boring
   ‘This book is very boring.’
B: Iya, sonna-hazu-nai
   No such-thing-NEG
   ‘No, that should not be right.’

3.2 Scope of negation
The second piece of evidence comes from the fact that the negative totemo cannot
be within the semantic scope of negation:

(12) Tetuya-nado totemo deki-nai.
    Staying up all night-NADO very can-NEG
    ‘Staying up all night is impossible.’ (Implication: I am emphasizing the
    impossibility.)

In (12), there is no reading that “it is not the case that I am emphasizing the pos-
sibility.”

3.3 Interaction with a modal
Relevant to the above evidence, the meaning of the negative totemo cannot be within
any kind of logical operator. For example, the negative totemo cannot be within the
semantic scope of a sentential (external) modal, such as daroo ‘probably’:

(13) Tetuya-o suru-nado totemo deki-nai-daroo.
    Staying up all night-ACC do-NANTE TOTEMO can-NEG-EPI.MOD
    ‘Probably, staying up all night will be impossible for him/her.’
    (Implication: I am emphasizing the degree of impossibility.)

Here, the speaker is not saying that there is a possibility of an emphatic emotion to-
wards the impossibility. Note that this phenomenon is not observed in the semantic
totemo. The semantic totemo does fall within the scope of daroo, as shown in (14):

(14) Taro-wa totemo isogasii-daroo.
    Taro-TOP very busy-EPI.MOD
    ‘Probably Taro is very busy.’

4 The formal analysis of the negative totemo
We now analyze the meaning of the negative totemo in a more theoretical fashion
based on example (15):

(15) Tetuya-o suru-nado totemo deki-na-katta.
    Staying up all night-ACC do-NADO very can-NEG-PAST
    At-issue: Staying up all night was impossible.
    CI: I am emphasizing the impossibility of staying up all night.
I will assume that the negative *totemo* is mixed content (McCready 2010; Gutzmann 2012) that takes a gradable modal predicate (e.g., *deki-nai* ‘unlikely’) on both at-issue and CI levels, but intensifies the degree only at the CI level, as in (16):

$$[[\text{totemo}_\text{NEG}]] = \lambda G_{\text{MODAL}} \lambda p \lambda t \lambda \exists d [d \succeq \text{STAND} \land G(d)(p)(t)(w)] \text{ at } t \in w$$

$$\bullet \lambda G_{\text{MODAL}} \lambda p \lambda t \lambda \exists d' [d' \succeq !\text{STAND} \land G(d')(p)(t)(w)] \text{ at } t_0 \in w_0$$

(where \( \max(G_{\text{MODAL}}) = 0, p(t)(w) \) is expected, \( p(t) \cap (\cap cg) = \emptyset \))

The left side of \( \bullet \) is an at-issue domain, and the right side of \( \bullet \) is a CI domain. In the at-issue dimension, the negative *totemo* denotes that the degree of a proposition \( p \) with respect to a gradable modal predicate \( G_{\text{MODAL}} \) is greater than a standard at \( t \) in \( w \). Namely, in the at-issue component, the negative *totemo* behaves as a *post(isitive)* morpheme (see Kennedy 2007 among others for the semantics of *pos*).

In the CI dimension, the negative *totemo* intensifies the degree of \( G_{\text{MODAL}} \) of the given proposition. Notice that this component is anchored to the current time \( t_0 \) and the current world \( w_0 \). Notice that the negative *totemo* also has several presuppositional components: (i) the maximum degree of \( G \) is 0 in terms of probability, (ii) the at-issue proposition \( p \) (the proposition without a negative gradable modal) is expected to be true, and (iii) the speaker assumes that there is no overlap between the common ground (Stalnaker 1978) and the at-issue proposition. (We will see later these components play a crucial role in explaining the polarity sensitivity and pragmatic function of the negative *totemo*).

The crucial assumption behind this analysis is that, similar to regular adjectives, negative modal expressions such as *deki-nai* ‘impossible’ and *soo-ni-nai* ‘unlikely’ are gradable predicates (cf. Lassiter 2011; Klecha 2012). This idea is supported by the fact that these expressions can combine with scalar modifiers/measure phrases, as shown in (17):

1. **100 paasento deki-nai.**
   100 percent can-NEG
   ‘100 percent impossible’
2. **Yaya ar-i-soo-ni nai.**
   A bit exist-likely-to NEG
   ‘A bit unlikely’

We can define the meaning of *deki-nai* and *soo-ni nai*, as in (18):

$$[[\text{muri}]] = \langle d, \langle p, \langle i, \langle s, t \rangle \rangle \rangle \rangle = \lambda d \lambda p \lambda i \lambda s \lambda t . \text{impossible}_{\text{ABILITY}}(p(t)(w)) = d$$

Note that the proposition \( p \) itself can contain negation, as shown in:

(i) **Tanpo-no jouto-o tuuchi-si-nai-nado totemo sinzi-rare-nai.**
   Mortgage-GEN transfer-ACC notice-do-NEG-NADO TOTEMO believe-can-NEG
   ‘It is unbelievable that the bank does not notify the transfer of the mortgage.’ (CI: I am emphasizing the impossibility.)
   (http://www.nikkeibp.co.jp/article/sj/20130227/341867/?ST=pbizboard&bzbpt=0)

Note that there is also a single word *muri* which has the same meaning as *deki-nai*:

(i) $$[[\text{muri}]] : \langle d^a, \langle p^a, \langle i^a, \langle s^a, t^a \rangle \rangle \rangle \rangle = \lambda d \lambda p \lambda i \lambda s \lambda t . \text{impossible}_{\text{ABILITY}}(p(t)(w)) = d$$
Let us consider how the meaning of the negative *totemo* is computed in a compositional fashion. As we have seen in (16), the negative *motto* is mixed content, meaning that we need to introduce a semantic mechanism that can compute the meaning of an at-issue dimension and the meaning of a CI dimension simultaneously. In this paper I will assume, following McCready (2010) and Gutzmann (2012) that the meaning of mixed content is computed via mixed application as in (19):

\[
\alpha(\gamma) \bullet \beta(\gamma) : \tau^a \times v^a
\]

Superscript *a* stands for an at-issue type, and superscript *s* stands for a shunting type. The shunting type *s* is used for the semantic interpretation of a CI involving an operation of shunting (cf. Potts’s (2005) CI application). When the derivation of the CI component of mixed content completes, following rule applies for the final interpretation of CI part:

\[
\text{Final interpretation rule: Interpret } \alpha \bullet \beta : \sigma^a \times t^s \text{ as follows: } \alpha : \sigma^a \bullet \beta : t^s
\]

(Based on McCready 2010)

The following figure shows the logical structure of (15):
Given this, why is it that the negative *totemo* must combine with a negative modal gradable predicate rather than a positive modal gradable predicate?

(22) *Tetuya-o suru-nado totemo dekiru.
    Staying up all night-ACC do-NADO TOTEMO can
    At-issue: Staying up all night is possible.
    CI: I am emphasizing the possibility (Use condition: I am refusing to update the context set with the at-issue proposition.)

One might think that the above analysis allows a situation in which the negative *totemo* takes a positive modal gradable predicate. I argue that $G_{MODAL}$ must be a negative gradable modal predicate because the negative *totemo* presupposes that the maximum degree of $G_{MODAL}$ is 0 in terms of probability, as represented in the parenthetical part in (16):

\[(23) \quad \max(G_{MODAL}) = 0\]

If a given $G_{MODAL}$ is a positive modal gradable predicate like *arieru* ‘likely’, then its maximal degree will be 1 (i.e., 100 percent). Thus, the sentence becomes infelicitous. However, if a modal predicate is negative, its maximal degree will be 0 (i.e., 0 percent). Thus, the resulting sentence is well formed. This analysis is compatible with the idea that a modal gradable predicate like *likely* is basically a relative gradable predicate (because it refers to a contextual standard) but can also behave as an absolute gradable predicate (having a closed scale; Kennedy & McNally 2005) when it co-occurs with the proportional modifier $n\%$ (Lassiter 2011; Klecha 2012).

Then, the question is: why is it that the negative *totemo* must occur with a modal? I argue that the negative *totemo* must occur with modality because it is a degree head that appears above a proposition. The negative *totemo* needs a measure function dimension and the gradable modal provides it. This implies that if a modal is not a gradable predicate, a sentence with the negative *totemo* becomes ill-formed. This prediction is borne out:

(24) Taro-wa gakusei-de-wa (*totemo) nai-hazuda.
    Taro-TOP student-PRED-TOP TOTEMO NEG-must
    ‘Taro must *totemo* not be a student.’

*Hazuda* is a sentential modal, thus it cannot interact with *totemo*.

5 Discourse-pragmatic properties of the negative *totemo*

Let us now consider the discourse-pragmatic properties of the negative *totemo* in detail.

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3I thank Eric McCready for the valuable discussion regarding this point.
5.1 The expectation behind the use of the negative *totemo*

In dialogue, the negative *totemo* is used under the assumption that the listener expects the at-issue proposition \( p \) to be true:

(25) A: Kono mondai tok-e-masu-ka?
    This problem solve-can-PRED.POLITE-Q
    ‘Can you solve this problem?’

B: Iya, boku-ni-wa I-to-TOP totemo tok-e-masen.
    No 1-to-TOP TOTEMO solve-can-NEG.PRED.POLITE
    ‘No, I can’t solve this problem.’ (I am emphasizing the inability.)

In this conversation, Speaker A expects that B can solve the problem. Formally, it is an open question, but there is an expectation of a positive answer. As Watanabe (2002) observes, the negative *totemo* is often used in contexts where the speaker thinks that the at-issue proposition/event is preferable or is necessarily the case. The requirement that \( p \) is expected means that the proposition is not new information. This is supported by the fact that it is unusual to use *ga* in these contexts, which conveys new information:

(26) Tetuya [-nado/??-ga] totemo deki-nai.
    Staying up all night -NADO/NOM TOTEMO can-NEG
    At-issue: Staying up all night is impossible.
    CI: I am emphasizing the impossibility.

The discourse particle *nado* in (26) signals that the given proposition/event is currently under discussion and that the speaker construes it negatively. Crucially, the above asymmetry disappears if we delete the negative *totemo*:

(27) Tetuya [-nado/-ga] deki-nai.
    Staying up all night -NADO/NOM can-NEG
    ‘Staying up all night is impossible.’
    CI: I am emphasizing the impossibility.

Notice that it is not always the listener who expects \( p \) to hold. As the following example shows, it can be a speaker, not the listener, who expects \( p \):

    Hope-do university-to-TOP TOTEMO pass-likely-to-NEG
    ‘It is unlikely that I can pass the entrance examination of a desired university.’ (CI: I am emphasizing the unlikelihood.)
    (http://www.gmm.co.jp/maeda.html)

5.2 Update refusal

The important point is that the negative *totemo* always rejects to update the expected proposition \( p \) with a common ground. The final part of the CI component conveys that the intersection between the set of possible worlds in which the at-issue proposition is true and the context set is empty:
Refusal of $p$ (in dynamic semantics)

\[ p \cap cs = \emptyset \]

This emptiness triggers a negative emotion of “rejection/refusal.” The following situation graphically describes the situation in (26) with *nado*:

\[ \cap cg \]

The set of worlds in which all of the shared propositions are true.

\[ \text{The set of worlds in which “I stay up all night” is true.} \]

The above figure shows that there is no world in $\cap cg$ in which the at-issue proposition (“I stay up all night”) is true.

The refusal update is quite different from usual negation. In the dynamic semantics literature, a simple negative proposition ($\neg p$) is usually assumed to create a new context set that contains no worlds in which $p$ is true (I abbreviate $\cap cg$ as $cs$):

\[ cs[\neg p] = cs - cs[p] \]

Notice, however, that sentences with the negative *totemo* have at-issue components as well, and within the at-issue components, there is a negative modal statement. It may be possible to analyze *impossible* ($\neg possible(p)$) as a negative sentence. If this is correct, there will be two kinds of information updates in the sentence with the negative *totemo*: one creating a new context set that contains no worlds in which a negative modal statement (e.g., $\neg possible(p)$) is true, and the other is refusing to update $p$ with a common ground.

### 5.3 Comparison with the English expressive *totally*

Let us now compare the discourse-pragmatic use of the negative *totemo* with the expressive *totally*. McCready & Schwager (2009) argue that the expressive use of *totally* conventionally implicates that the speaker is maximally epistemically committed to his/her justification for his/her use of the proposition. An interesting point is that, as Beltrama (2015) shows, the expressive *totally* can be used in a situation in which the at-issue proposition is expected to be false:

\[ \neg \text{John: Luke didn’t get married at 25. (\neg p)} \]

Mark: No! What are you talking about! He TOTALLY got married at 25.

(Beltrama 2015)

This use of the expressive *totally* seems to behave as a mirror image of the negative *totemo* (Anastasia Giannakidou, personal communication.) Note, however, these words are not always in a mirror image. As Beltrama (2015) shows, the expressive *totally* can also be used in situations in which the previous utterance is a polar question about $p$, as in (33), or a tentative assertion of $p$, as in (34):
(33) John: Did Luke get married at 25?
   Mark: Yes, he TOTALLY got married at 25. (Beltrama 2015)

   Mark: Yes, he TOTALLY got married at 25. (Beltrama 2015)

The negative *totemo* cannot be used in these environments. This suggests that the distribution of the expressive *totally* is wider than the negative *totemo*4.

6 Toward a new typology of negative polarity items

Finally, let us discuss the characteristics of the negative *totemo* from a broader perspective. The existence of the negative *totemo* suggests that there is a new class of NPIs, i.e. discourse-oriented NPIs, or more specifically, oppositive NPIs.

<table>
<thead>
<tr>
<th>Contribute to</th>
<th>Not contributing to</th>
</tr>
</thead>
<tbody>
<tr>
<td>“what is said” (= at-issue)</td>
<td>“what is said” (=CI)</td>
</tr>
<tr>
<td>Within the semantic scope of negation</td>
<td>Minimizer NPIs, <em>any</em> (Class 1)</td>
</tr>
<tr>
<td>Not within the semantic scope of negation</td>
<td><em>wh-mo</em>, Greek emphatic n-word (Class 2)</td>
</tr>
</tbody>
</table>

Table 1: Typology of Negative Polarity Items

Class 1 and Class 2 negative polarity items in Table 1 have been extensively studied in the literature of negative polarity items/negative concord. The typical examples of Class 1 items are *any*-type NPIs and minimizer NPIs (e.g. Kadmon & Landman. 1993; Krifka 1995; Lee & Horn 1994; Chierchia 2013). These NPIs are within the semantic scope of negation and their meanings are part of “what is said”:

(35) a. John didn’t say anything.
   b. John didn’t say a word.
   c. John doesn’t give a damn.

For example, (35c) roughly means that “John didn’t help even for a minimal degree” 5. The idea that the meanings of *any* and minimizers are “part of what is said” is supported by the fact that their meanings can be targeted by saying “No, that is not true”:

(36) A: There aren’t any cookies left.

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4Note also that as Beltrama (2015) claims, *totally* can appear in a discourse-initial position (i.e. in the out-of-the-blue content).

5Chierchia (2013) analyzes the meaning of (35c) as (i):

(i) Chierchia’s semantics of *give a damn* (Chierchia 2013: 151)
   a. E[John doesn’t give a damn[-σ]]
   b. E(¬∃s [care(s, j, dmin)]) =
   c. ¬∃s[care(s, j, dmin)] ∧ ¬∃s [care(s, j, dmin)] < μ ¬∃ s [care(s, j, d’)]
B: No, that is not true.

The typical examples of Class 2 negative polarity items are emphatic n-words in Greek (Giannakidou 2000), Hungarian n-words (Szabolcsi 1981), Japanese *sika* (e.g., Kataoka 2006), or wh-*mo* NPIs (e.g., Shimoyama 2011). They are not within the semantic scope of negation, but their meanings are part of “what is said.” For example, Giannakidou (2000) argues that Greek emphatic n-words, including *TIPOTA*, are universal quantifiers that outscope negation, based on various linguistic facts/diagnostics, including *almost/absolutely* modification, donkey anaphora and predicate nominals:

(37) Dhen ipa TIPOTA.
    Not said.1sg n-thing
    ‘I didn’t say anything.’ (Giannakidou 2000: 458)

Shimoyama (2011) claims that the Japanese wh-*mo* also has a wide-scope universal property based on examples like (38):

(38) Kokyaku-no dare-kara-mo gozentyuu-wa taitei denwa-ga
    Client-GEN who-from-MO morning-TOP mostly call-NOM
    nakat-ta.
    not.exist-PAST
    ‘For every client, it was mostly the case that there was no call from him or her in the mornings.’ (Shimoyama 2011: 13)

In (38) there is a reading “∀ > Q mostly”, and this supports the idea that wh-*mo* must be interpreted as a wide-scope universal, but not as a narrow scope existential.

Class 1 negative polarity items and Class 2 negative polarity items are different in terms of scope, but their meanings are all part of “what is said.” They contribute to the truth condition of a given sentence. The Japanese negative *totemo* belongs to neither Class 1 nor Class 2; it is beyond the scope of negation and does not contribute to “what is said.”

Finally let us consider the following question: are there class 4 NPIs? Logically, there cannot be such NPIs. There cannot be expressions that are within the scope of negation but do not contribute to “what is said.” However, we can say that the so-called vulgar NPIs partially belong to this class. (I thank Jason Merchant and Thomas Grano for the valuable discussions regarding vulgar NPIs.)

(39) a. He doesn’t know shit about GB. (Postal 2004: 162)
    b. Olmstead doesn’t understand squat about topology. (Postal 2004: 159)

Postal (2004) claims that there is a perfect equivalence between *any* and vulgar NPIs:

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6In the literature, Class 2 NPIs are often called negative concord items (NCIs) because they are placed above negation and may appear in fragment answers. Because NCIs also need negation for legitimacy, I assume that NCIs constitute a variety of NPIs (see, e.g., Giannakidou (2011) for the relationship between NPIs and NCIs).
a. Irma does not understand anything about clones.

I argue that although the above sentences may be truth conditionally equivalent, they differ at the not-at-issue level. Vulgar NPIs are anti-honorific expressions similar to the pure expressives like bastard, fucking. It seems that the vulgar NPIs in the above sentences conventionally implicate a speaker’s negative attitude/emotional feeling toward an utterance situation. I consider vulgar NPIs to be mixed content in the sense of McCready (2010) and Gutzmann (2012), in that they have truth-conditional meaning similar to any, but in addition to that they have an expressive/CI component. If we consider them as such, the not-at-issue component of vulgar NPIs will belong to Class 4, and the vulgar NPIs, as a whole, have properties of both Class 1 and Class 4.

7 Conclusion
This paper investigated the meaning and use of the Japanese negative totemo and considered what the existence of the negative totemo suggests for the theories of polarity items.

I argued that the negative totemo is not a logical NPI, which is licensed by negation or downward-entailing/non-veridical operators (see e.g., Ladusaw 1980; Giannakidou 1998). Rather, it is an expressive/conventional implicature (CI)-triggering expression (see e.g., Grice 1975; Potts 2005), which intensifies the unlikelihood or impossibility of a given proposition (the proposition without negation) and refuses to update the common ground (the context set) with the at-issue proposition.

I then claimed that there is a new class of NPIs, expressive NPIs (or more specifically, oppositive NPIs), which are not licensed by logical operators, but are regulated by their pragmatic functions.

In a future study, I would like to investigate the extent to which expressive/oppositive NPIs are pervasive in natural language. It seems that there are various related phenomena that behave similarly to the negative totemo. For example, Japanese nani-mo ‘what-MO’ has a not-at-issue use, and in this use it must appear in a negative modal environment, where it has a function of opposition:

(41) Nani-mo ima sore-nituite hanasu-hituyoo-wa {nai/*aru}.
What-MO now it-about talk-need-TOP NEG/BE
At-issue: You do not need to talk about it now.
CI: The at-issue proposal is going too far. (I have a negative feeling toward the current proposal (i.e. to talk about it)).

In (41), nani-mo conventionally implicates that the at-issue proposition is going too far. Therefore, similar to totemo, it serves the pragmatic function of rejection.

References


