

Positive polarity minimizers: the semantics/pragmatics interface*

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1 Introduction

Observe the following examples:

- (1) a. Kono sao-wa {*chotto/sukoshi*} magat-teiru.
This rod-TOP a bit bend-STATE
'This rod is a bit bent.'
- b. *Kono sao-wa {*chotto/sukoshi*} magat-tei-nai.
This rod-TOP a bit bend-STATE-NEG
'lit. This rod is not a bit bent.'

In (1a), the minimizers *chotto/sukoshi* directly combine with the gradable predicate *magat-teiru* 'bent.' Note that these minimizers are positive polarity items (PPIs) because as we can see in (1b), they cannot appear in a negative sentence.

Interestingly, *chotto*, but not *sukoshi*, can also appear in a context where it does not semantically modify a gradable predicate:

- (2) {*Chotto/*sukoshi*} hasami aru? (Question)
A bit scissors exist
'lit. A bit/a little, are there scissors?'
- (3) Sore-wa {*chotto/*sukoshi*} deki-masen. (Assertion)
That-TOP a bit can-NEG.PRED.POL
'lit. A bit/a little, I cannot do that.'

Matsumoto (1985, 2001) observes that this type of *chotto* is a 'lexical hedge' like *kinda* or *sort of (sorta)* (Lakoff 1972) and claims that it is used to weaken the degree of illocutionary force. I will call the minimizer in (1) an amount minimizer and the minimizers in (2) and (3) expressive minimizers. Note that as example (3) shows, this type of *chotto* can appear in a negative environment. Thus, the following question naturally arises: What are the similarities and differences in meaning

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between the amount minimizer and the expressive minimizer? And how can we explain the distribution differences between the two kinds of minimizers in a theoretical way? The goal of this paper is to consider these questions in terms of the semantics and pragmatics interface and argue for the following points. First, I will argue that although the amount minimizer and the expressive minimizer share the same scalar meaning, their meanings are compositionally and dimensionally different. While the meaning of amount minimizers contributes to ‘what is said’, the meaning of expressive minimizers is a conventional implicature (CI). I will then argue that the dimensional difference between the two types of minimizers is reflected in their distribution patterns. It will be shown that the distribution of amount minimizers is constrained by the interaction between them and at-issue ‘licensors’ (i.e. there is a dependency), whereas expressive minimizers are constrained by their pragmatic property.

The theoretical implication is that in order to successfully capture the distribution patterns of polarity items, it is important to distinguish levels of meaning (at-issue meaning vs. CI meaning); i.e., whether a particular item is in an at-issue domain or a CI domain. The multidimensional approach (Potts 2005, 2007) can naturally explain the meanings and distribution patterns of the Japanese minimizers.

This paper proceeds as follows: In section 2 we will consider the empirical differences between the amount use and the expressive use in terms of the semantics-pragmatics interface. Section 3 provides formal analyses of the meanings of the amount and expressive minimizers. Section 4 provides background on the polarity sensitivity of minimizers in English and Japanese, and in section 5 we will discuss the distribution patterns of the Japanese positive polarity minimizers. It will be shown that the distribution patterns of the two types of minimizers are different and Ernst’s theory only applies to amount minimizers. Section 6 concludes.

2 The amount use vs. the expressive use of minimizers

The meaning of amount minimizers contributes to ‘what is said’, whereas the meaning of expressive minimizers is a conventional implicature (Grice 1975; Potts 2005, 2007). Building on Grice’s idea of conventional implicature, Potts (2005) defines CIs as follows (see also Kaplan 1999; Neale 1999):

- (4) Potts’s definition of CI
 - a. CIs are part of the conventional meaning of words.
 - b. CIs are commitments, and thus give rise to entailments.
 - c. These commitments are made by the speaker of the utterance.
 - d. CIs are logically and compositionally independent of what is ‘said.’

There are several pieces of linguistic evidence that argue for the fact that amount minimizers and expressive minimizers are logically and compositionally different. The first such piece of evidence is concerned with the word *dake* ‘only’ (Matsumoto 1985). The focus particle only focuses on at-issue contents:

- (5) Kono doa-wa {*chotto/sukoshi*}-dake ai-teiru.
 This door-TOP a bit -only open-STATE
 ‘This door is open only a bit.’
- (6) * *Chotto*-dake hasami nai?
 A bit-only scissors NEG.EXIST
 ‘lit. Only *chotto* aren’t there scissors?’

The second piece of evidence is concerned with negative response (Karttunen and Peters 1979; Potts 2005):

- (7) A: Kono doa itumo *chotto* ai-tei-masu-ne.
 This door always a bit open-STATE-PRED.HON-NE
 ‘This door is always open a bit.’
 B: Iya. Sonna-hazu-wa nai-desu-yo.
 No that-must-TOP NEG-PRED.POL-YO
 ‘No. That can’t be right.’
- (8) A: Sumimasen. *Chotto* ima jikan-ga nai-desu.
 I am sorry A bit now time-NOM NEG-PRED.POL
 ‘I am sorry. *Chotto*, I don’t have time now.’
 B: Iya. Sonna-hazu-wa nai-desu-yo.
 No That-must-TOP NEG-PRED.POL-YO
 ‘No. That can’t be right.’

In (7) what the pronoun *sonna* refers to is the proposition including *chotto*. On the other hand, in (8) *sonna* refers the proposition without *chotto*.

The third piece of evidence is concerned with the co-occurrence of at-issue ‘intensifiers.’ As the following examples show, unlike the amount minimizers, the expressive *chotto* can co-occur with at-issue intensifiers or emphatic NPI items (Israel 1996):

- (9) The expressive *chotto* and the intensifiers
- a. *Chotto* jikan-ga **zenzen** nai-desu.
 A bit time-NOM at all NEG-PRED.POL
 ‘*Chotto*, I don’t have time at all.’
- b. *Chotto* koko-wa **kanari** kiken-da.
 A bit here-TOP quite dangerous-PRED
 ‘*Chotto*, this place is quite dangerous.’
- (10) The amount *sukoshi* and the intensifiers
- a. *Koko-wa *sukoshi* **kanari** kiken-da.
 This place-TOP a bit quite dangerous-PRED
 ‘This place is a bit quite dangerous.’
- b. *Kono sao-wa *sukoshi* **sootoo** magat-teiru.
 This rod-TOP a bit quite bend-PERF
 ‘This rod is a bit quite bent.’

If CI minimizers are at-issue content, (9) will be unnatural because it will be semantically odd to both minimize and intensify a degree at the same time. However, the sentences in (9) are perfectly natural. This fact supports the argument that the meaning of the expressive *chotto* is independent of ‘what is said.’

The fourth piece of evidence is concerned with embedability. Potts (2005) claims that CI content is speaker-oriented even if it is embedded within an attitude predicate:

(11) Sue wrongly believes that that jerk Conner got promoted. (Potts 2005: 31)

The expressive *jerk* is speaker-oriented and cannot be anchored to the subject.¹ This contrasts with the at-issue content. The at-issue proposition that *Conner got promoted* is asserted to hold only in Sue’s mind.

The same observation can be made with regard to the Japanese minimizers. The at-issue minimizers cannot scope out of the complement of attitude predicates, but the expressive *chotto* can:

- (12) At-issue minimizer
 Taro-wa kono sao-wa *sukoshi* nagai -to omo-tteiru.²
 Taro-TOP this rod-TOP a bit long -that think-STATE
 ‘Taro thinks that this rod is a bit long.’
- (13) CI minimize
 (Context: a secretary is telling visitor about Prof. Yamada’s schedule.)
 Yamada-sensei-wa konsyuu-wa *chotto* jikan-ga
 Tamada-teacher-TOP this week-TOP a bit time-NOM
 nai-to omo-te-orare-masu.
 NEG.EXIST-that think-TE-SUB.HON-PRED.POL
 At-issue: Prof. Yamada thinks that this week he does not have time.
 CI: I am weakening the force of my assertion.

Sukoshi is subject-oriented, while the expressive *chotto* is speaker-oriented.

Based on the above diagnostics, it is safe to conclude that the amount minimizers are dimensionally different from the expressive minimizer.³

3 The meaning of positive polarity minimizers

3.1 The meaning of the amount minimizers

¹ However, researchers have shown recently that CI expressions such as appositive or expressive are not necessarily always speaker-oriented (See, Wang, Reese and McCready 2005; Karttunen and Zaenen 2005; Sauerland 2007; Amaral et al. 2007; Harris and Potts 2009).

² Note that I am using *sukoshi* so that the minimizer can only be interpreted as an at-issue minimizer.

³ However, it seems to me that the expressive *chotto* can be subject-oriented if we use the non-honorific form of ‘believe.’

In light of the above argument, what are the meanings of the two types of minimizers? Let us first consider the possible meanings of the amount minimizer.

In order to understand the meaning of an amount minimizer, it is important to take into consideration the difference between relative gradable adjectives and absolute gradable adjectives:

- (14) a. Kono roopu-wa {*chotto/sukoshi*} nagai.
 This rope-TOP a bit long
 ‘This rope is a bit long.’ (Standard = a contextual standard)
- b. Kono sao-wa {*chotto/sukoshi*} magat-teiru.
 This rod-TOP a bit bend-STATE
 ‘This rod is a bit bent. (Standard = a minimum standard)

The adjective *nagai* ‘long’ is a relative gradable adjective that posits a contextually determined standard. Thus, sentence (14a) is interpreted as ‘the length of this rope is slightly greater than a contextual standard.’ On the other hand, the adjectival predicate *magat-teiru* is an absolute gradable adjective (lower-closed scale adjective) that posits a minimum endpoint. Thus, sentence (14b) is interpreted as ‘the bentness of this rod is slightly greater than a minimum endpoint (i.e. zero point).’ What is crucial here is that the value of the standard (STAND) is sensitive to the kinds of adjectives present.

I will propose the following denotation for the amount minimizers:

$$(15) \llbracket \text{chotto/sukoshi}_{\text{AMOUNT}} \rrbracket = \lambda G \lambda x. \exists d [d >_{\approx} \text{STAND} \wedge G(d)(x)]$$

The symbol ‘ \approx ’ means slightly. The minimizer in (15) takes a gradable predicate and an individual and returns a scalar meaning such that the degree of x with respect to a gradable predicate G is slightly greater than a standard.

As for the meaning of gradable adjectives, I assume that they represent relations between individuals and degrees (Seuren 1973; Cresswell 1977; von Stechow 1984; Klein 1991; Kennedy 2007). For example, the meanings of *nagai* ‘long’ and *magat-teiru* ‘bent’ can be represented as in (16):

- (16) a. $\llbracket \text{nagai} \rrbracket = \lambda d \lambda x_{\langle e \rangle}. \text{long}(x) = d$
 b. $\llbracket \text{magat-teiru} \rrbracket = \lambda d \lambda x_{\langle e \rangle}. \text{bent}(x) = d$

Thus, if the amount minimizer is combined with the gradable predicate *magat-teiru* ‘bent’ and the individual *kono sao*, we get the following truth condition:

$$(17) \llbracket \text{sukoshi/chotto} \rrbracket (\llbracket \text{magat-teiru} \rrbracket) (\llbracket \text{kono sao} \rrbracket)$$

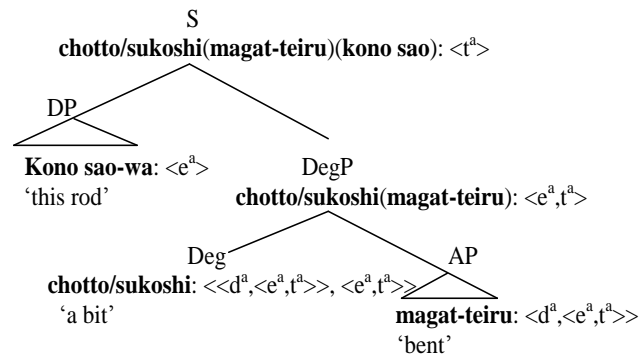
$$= \lambda x. \exists d [d >_{\approx} \text{STAND}_{\text{min}} \wedge \text{bent}(x) = d]$$

$$= \exists d [d >_{\approx} \text{STAND}_{\text{min}} \wedge \text{bent}(\text{this rod}) = d]$$

‘The degree of bentness of this rod is slightly greater than a minimum standard.’

Note that if the gradable predicate is a relative gradable adjective like *nagai* ‘long’, then STAND in (15) is interpreted as a contextual standard. (See Kennedy (2007) for a detailed discussion of how the value of STAND is determined by the kinds of adjectives present.) The following figure shows the basic logical structure of the sentences in (14b) (The superscript *a* stands for an at-issue type):

(18)



3.2 The case of the expressive minimizer *chotto*

Let us now consider the meaning of the expressive minimizer based on the following example:

- (19) *Chotto* jikan-ga nai-desu. (polite refusal)
 A bit time-NOM NEG.EXIST-PRED.POL
 ‘Chotto I don’t have time.’
 (I am refusing your request in a polite way.)

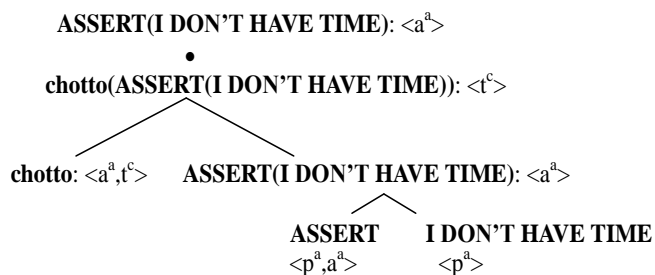
I would argue that the expressive *chotto* essentially has the same scalar meaning as the amount minimizers, except that the latter operate on a speech act. Here *chotto* is operating on the assertion that ‘I don’t have time’ (which can be analyzed as an indirect speech act of refusal).

There are various approaches to the representation of clause type systems. Here I assume, following Stenius (1967) and Krifka (2001), that an illocutionary operator combines with a sentence radical meaning (typically a proposition) to form a speech act (See also Tomioka 2010). This approach assumes a general type formation as follows:

- (20) a. Basic types: *e* entities, *t* truth values, *p* (=st) propositions, *a* speech acts.
 b. A Speech Act operator is a function of the type of sentence radical it selects for type *a*.
 c. The variables for type *a* = {U, U', U'', ...}

The following figure shows the logical structure of (19) (The superscript a stands for an at-issue type and the superscript c stands for a CI type):

(21)



I would like to propose the following denotation for the expressive *chotto*:

$$(22) \llbracket \text{chotto}_{\text{EXP}} \rrbracket = \lambda u_{\langle a \rangle}. \exists d [d \succ_{\approx} \text{STAND}_{\text{MIN}} \wedge \text{commitment}(u) = d]$$

(Where u is a variable of type $\langle a \rangle$)

The expressive *chotto* takes an at-issue speech act and returns a CI scalar meaning that ‘the speaker’s degree of commitment to a given speech act is greater than a minimum standard by a small amount (zero point).’ (More specifically, the at-issue speech act is both passed on to the mother node and part of the argument to the CI *chotto* via a CI function application (Potts 2005)). This minimum commitment induces a politeness meaning. This analysis shows that unlike the at-issue minimizers, the CI *chotto* inherently posits a **minimum** standard and a scale of **commitment**. In that sense, it behaves like a predicate, similar to evaluative adverbs (e.g. *amazingly*) (e.g. Morzycki 2008; Nouwen 2008).

However, our analysis can also capture a significant similarity between the two kinds of minimizers: they have the same scalar meaning of ‘greater than a standard by a small amount.’⁴

4 Polarity sensitivity of minimizers

What are the implications of the difference in meaning in terms of dimensionality for the theory of polarity sensitivity? In this section we will investigate the relationship between the meanings of the two types of minimizers and their distribution patterns. First let me introduce the basic properties of minimizers.

4.1 Minimizers vs. diminishers (English)

Bolinger (1972: 120) argues that *a bit* and *a little* are synonymous in a positive environment but react differently in a negative environment (see also Horn 1989):

⁴ Sawada (in press, 2010) proposes a mechanism that explains the two kinds of meanings based on one lexical item.

- (23) a. I'm {a bit/a little} tired. MINIMIZER (positive)
 b. I'm not a bit tired. (= I'm not at all tired.) MINIMIZER (negative)
 c. I'm not a little tired. (= I'm pretty tired.) DIMINISHER

In (23a) both *a bit* and *a little* are interpreted in the same way. However, things become different in a negative environment. Whereas (23b) means 'I am not at all tired', (23c) means 'I am pretty tired.'⁵ *A little* in (23c) is used as a metalinguistic negation (Horn 1989: 401).

4.2 Minimizers in Japanese (at-issue type)

Unlike English, Japanese minimizers morphologically distinguish minimizer NPIs from minimizer PPIs.

- (24) a. Taro-wa {*chotto/sukoshi*} tukare-teiru. (PPI)
 Taro-TOP a bit tire-STATE
 'Taro is a bit tired.'
 b. Taro-wa {*chitto-mo/sukoshi-mo*} tukare-tei-nai.⁶ (NPI)
 Taro-TOP a bit-MO tire-STATE-NEG
 'Taro is not a bit tired.' (= I am not tired at all.)

The sentences become ungrammatical if we add negation in (24a) or if we delete negation in (24b):

- (25) a. *Taro-wa {*chotto/sukoshi*} tukare-tei-nai.
 Taro-TOP a bit tire-STATE-NEG
 'Taro is not *sukoshi* tired.'
 b. *Taro-wa {*chitto-mo/sukoshi-mo*} tukare-teiru.
 Taro-TOP a bit-MO tire-STATE-NEG
 'Taro is *sukoshi-mo* tired.'

This strongly suggests that Japanese is a 'strict' PPI/NPI language (See Giannakidou in press; Yoshimura 2007).

To obtain the meaning of diminishment, Japanese uses a totally different expression: *dokoro-de-wa-nai*:

- (26) Taro-wa {*chotto/sukoshi*} tukare-teiru dokoro-de-wa-nai.
 Taro-TOP a bit tire-STATE place-DE-TOP-NEG
 'I am not a little tired. (I am extremely tired.)'

⁵ Some researchers claim that minimizer NPIs should be analyzed as containing a silent *even* (Heim 1984). According to this analysis sentence (23b) should be interpreted as 'I'm not even a bit tired.'

⁶ Note that there is a phonological change from *chotto* to *chitto* when the particle *mo* is attached to *chotto*.

The phrase “ADJ + *dokoro-de-wa-nai*” is an idiomatic expression that indicates that adjective A is ‘not appropriate’ to describe the situation (see also Hattori 2005). In (26) the speaker is saying that the current degree with respect to Taro’s tiredness (i.e. *a bit tired*) is not appropriate at all. Thus it is possible to consider that *dokoro-de-wa-nai* has a meaning of ‘metalinguistic negation’ (e.g. Horn 1985, 1989, Burton-Roberts 1989) in the sense that the speaker is talking about appropriateness or precision.

5 Distribution of *sukoshi* and *chotto*

In the previous section we considered *sukoshi* and *chotto* as a positive polarity item, because they cannot co-occur with negation. However, matters are more complicated if we look at the expressive minimizers, which can appear in a negative environment. This section investigates the distributional difference between the amount minimizer and the expressive minimizer and argues that the dimensional difference is reflected in their distribution patterns.

5.1 Theoretical background on PPIs: adverbs and polarity

This section introduces a theory of PPIs that will provide a starting point for analyzing the distribution patterns of the Japanese minimizers.

Building on the discussion of the distributional restriction on speaker-oriented adverbs in Bellert (1977), Nilsen (2004) argues that speaker-oriented adverbs such as evaluatives (*fortunately*), evidentials (*evidently*) and some modal adverbs (*possibly*) are positive polarity items (PPIs). Nilsen observes that they are excluded from the types of environments that license negative polarity items (NPIs). As the following examples show, these adverbs are degraded in questions, antecedents of conditionals, imperatives, under negation, and under clause-embedding predicates like *hope*, as well as within the scope of monotone decreasing subject quantifiers such as *no N*. The following data are from Nilsen (2004) (ADV represents any of the speaker-oriented adverbs):

- (27) a. Did Stanley (*ADV) eat the Wheaties?
- b. If Stanley (*ADV) ate the Wheaties, ...
- c. (*ADV) eat (*ADV) the Wheaties!
- d. Stanley (ADV) didn’t (*ADV) eat the Wheaties.
- e. I hope Stanley (*ADV) ate the Wheaties.
- f. No students (*ADV) ate the Wheaties.

Nilsen (2004) proposes a scalar account based on the adverb *possibly*. He argues that the distribution of *possibly* is based on the following two properties: (i) the adverb *possibly* is a domain shrinking possible world quantifier (as opposed to a domain widening operator like the NPI *any* (Kadmon and Landman 1993)), and (ii) a general pragmatic constraint of strengthening: the result of domain-narrowing must entail the same proposition without domain-narrowing.

Ernst (2009) also considers speaker-oriented adverbs to be PPIs, but he

focuses on the fact that there is variation among speaker-oriented adverbs with respect to distribution patterns, a variation that he captures using Giannakidou's (1999) (non)veridical theory. Since we are interested in the distributional difference between the two kinds of Japanese minimizers, I will use Ernst's (2009) theory as an analytical tool. Ernst proposes the following licensing conditions for positive polarity items:

- (28) Licensing Conditions for Positive Polarity Items (adapted from conditions for NPIs in Giannakidou 1999)
- a. A positive polarity item A is blocked in the local scope of a nonveridical/antiveridical operator.
 - b. In certain cases, A may be licensed indirectly despite being in the local scope of a nonveridical/antiveridical operator in a sentence S , iff S gives rise to a positive implicature φ .

(Ernst 2009: 510)

The local scope of a nonveridical operator is defined based on c-command at LF (Giannakidou 1998; see also Klima 1964; Jackendoff 1972; Ladusaw 1979; Linberger 1980). That is, positive polarity items are blocked if they are in the c-command domain of a nonveridical operator (licenser) at LF.

Veridicality and nonveridicality are defined in terms of truth as in (29); see also Zwarts (1995).

- (29) (Non)veridicality for propositional operators
- i. A propositional operator F is veridical iff Fp entails p : $Fp \rightarrow p$; otherwise F is nonveridical.
 - ii. A nonveridical operator F is *antiveridical* iff Fp entails *not* p : $Fp \rightarrow \neg p$.
A propositional operator is a proposition embedding function—a sentence modifier.

F is veridical iff whenever Fp is true, p is also true; if this does not hold, F is nonveridical. A nonveridical F is antiveridical iff whenever Fp is true p is not true. Questions, modals and intentional operators are typical nonveridical operators. The typical antiveridical operator is a negation. This constitutes a proper subset of the nonveridical.

Ernst (2009) claims that there is variation among speaker oriented adverbs in terms of distribution patterns. He introduces two kinds of PPIs: strong PPIs and weak PPIs. According to him the adverbs *unfortunately*, *luckily*, and *amazingly* are strong PPIs because they are blocked in both anti-veridical and nonveridical contexts. On the other hand, the adverbs *famously*, *convincingly*, and *probably* are weak PPIs, because they are blocked in antiveridical contexts but are OK in nonveridical contexts such as questions, the antecedents of conditionals, and imperatives. Ernst also claims that there is a semantic correlation between the distinction between strong PPIs and weak PPIs and the degree of subjectivity. Strong PPIs

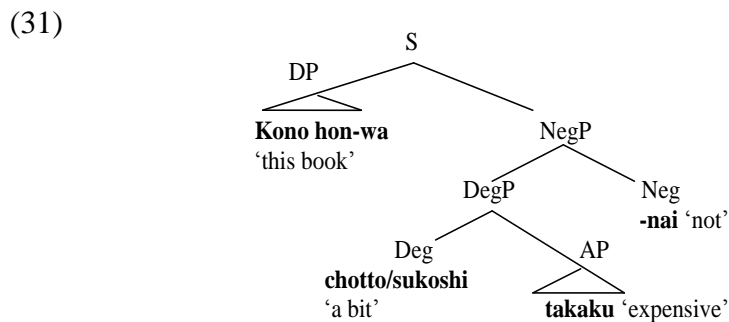
are those that are obligatorily subjective (and therefore have strong speaker commitments), whereas weak speaker-oriented adverbs allow an objective interpretation and are less tied to the speaker.

5.2 The distribution of the at-issue minimizer PPIs

Based on the above setup, let us now analyze the distribution patterns of minimizer PPIs. First, let us analyze the case of the at-issue minimizers. As we observed in the previous sections, the amount minimizers cannot appear with negation:

- (30) *Kono hon-wa {sukoshi/chotto} takaku-nai. (Negation)
 This book-TOP a bit expensive-NEG
 ‘lit. This book is not a bit expensive’

We can say that the sentence is ill-formed because the minimizers are in the local scope of negation at the LF:



However, the amount minimizers can appear in nonveridical contexts:

- (32) *Question*
 Shio-o {sukoshi/chotto} itadake-masu -ka.
 Salt-ACC a bit receive.POL-PRED.POL -Q
 ‘Could I receive a bit of salt?’
- (33) *Conditional*
 {Sukoshi/chotto} yasume -ba kaifuku-suru -daroo.
 A bit rest -COND recover-do -will
 ‘If you rest a bit, you will be recovered.’

These data suggest that the at-issue amount minimizers are ‘weak PPIs’ in the sense in which Ernst (2009) uses the term. They are blocked in antiveridical contexts (i.e. negation), but they can appear in nonveridical contexts.

5.3 The distribution of the CI *chotto*

Let us now consider the distribution pattern of the expressive *chotto*. Unlike the amount minimizers, the expressive *chotto* can appear in a negative environment:

- (34) {*Chotto*/**sukoshi*} sore-wa deki-masen. (Assertion)
 A bit that-TOP can-NEG.PRED.POL
 At-issue: I can't do that.'
 CI: The degree of commitment of the assertion is low.'
- (35) Sore-wa {*chotto*/**sukoshi*} deki-masen. (Assertion)
 That-TOP a bit can-NEG.PRED.POL
 At-issue: I can't do that.'
 CI: The degree of commitment of the assertion is low.'

It is important to note that the expressive *chotto* does not always have to be at a sentence initial position. It can appear in any position before the predicate.

As for other environments, the expressive *chotto* can appear in nonveridical contexts such as questions and imperatives:

- (36) *Chotto* hasami aru? (Question)
 A bit scissors exist
 'lit. *Chotto* are there scissors?'
- (37) *Chotto* koohii tuku-tte. (Imperative)
 A bit coffee make-IMP
 'lit. *Chotto* make coffee' (CI reading)

However, it is not natural to embed the CI *chotto* inside a conditional clause:

- (38) [Moshi Taro-ga {??*chotto*/**sukoshi*} jikan-ga
 If Taro-NOM a bit time-NOM
 na-kereba] denwa -si-te kudasai. (Conditional)
 NEG.exist-COND phone -do-TE please
 'If *chotto* Taro doesn't have time, please phone me.'

(38) contrasts with (33) as to acceptability.⁷ Here I intentionally used negation in order to make sure that the minimizer is obligatorily interpreted as a CI minimizer. Recall that the at-issue minimizers *chotto/sukoshi* cannot occur with negation. Furthermore, it is difficult to embed the CI *chotto* inside a relative clause:

- (39) a. ??[*Chotto* jikan-ga nai] gakusei
 A bit time-NOM NEG.EXIST student
 'lit. The student who *chotto* does not have time'
- b. {*Chotto/sukoshi*} magat-ta ki
 A bit bend-TA tree
 'lit. A slightly bent tree'

⁷ However, if we delete the subject *Taro-ga* in (38), the acceptability of the sentence may improve. This may be because in that case the subject of the conditional clause is the addressee. I thank Masaya Yoshida and Yusuke Kubota for their valuable discussions on this issue.

One might think that (39a) is not bad. I think that this is because of a processing effect. Until we get to the head noun *gakusei*, (39a) is interpreted as a sentence.

The above data show that the distribution of the expressive *chotto* is constrained by its pragmatic function/property (rather than the ‘semantic’ licensing conditions (i.e. dependency)). (34)-(37) are natural because the expressive *chotto* never appear in the scope of other operators. CIs always have widest scope (or ‘scopeless’ in the sense of Kaplan) (Potts 2005; Kaplan 1989). (38) and (39a) are odd because it is difficult to get an illocutionary force inside the conditional and relative (adjectival) clauses.⁸ This means that we must explain the distributions of minimizers according to their levels of meaning. The distribution of the at-issue minimizers is constrained by the semantic relation between the at-issue nonveridical/antiveridical operator and the minimizer, while the distribution of the CI minimizer is constrained by its pragmatic property/function.

5.3 Conclusion: rethinking the polarity theory of adverbs

This paper has considered the meanings and distribution patterns of the Japanese minimizers *sukoshi* and *chotto* in terms of the semantics/pragmatics interface. I argued that although the two kinds of minimizers share the same scalar meaning, they are interpreted along different dimensions. The amount minimizers are interpreted at the at-issue level, but the expressive minimizers are conventional implicatures. I then argued that the dimensional difference is reflected in their distribution patterns. While the distribution of the amount minimizers is constrained by a semantic relation between a licenser and a licensee, the distribution of the CI minimizer is constrained by its pragmatic property/function. This paper showed that a multidimensional approach (Potts 2005) can naturally explain the seemingly puzzling distribution patterns of the Japanese minimizers.

What does this paper imply for the theory of polarity items in general? It seems to me that the current theories of PPIs have been constructed without carefully considering the dimensionality of meaning. For example, Ernst (2006) (and also Nilsen (2004)) constructs a theory of PPIs based on the assumption that all kinds of speaker-oriented adverbs can be analyzed in a unified way. However, as many researchers argue, the semantic/pragmatic characteristics of, for example, utterance modifiers like *frankly speaking* and modal adverbs like *possibly* are quite different (e.g. Potts 2005; Bonami and Goddard 2008; Scheffler 2008). I hope this paper shows that in order to successfully construct a theory of polarity

⁸ Note that the expressive *chotto* can appear in the ‘because’ clause:

(i) *Chotto ima jikan-ga nai-node atode denwa-si-masu.*
A bit now time-NOM NEG.exist-because later phone-do-PRED.POL
‘Since *chotto* I don’t have time now, I will call you later.’

This may because embedded reason clauses have a root-clause property (Mittwoch 1977; Krifka 2002). I thank the members at the Wed3 meeting for bringing the above data to my attention.

items, it is important to distinguish between levels of meaning; i.e., whether a particular use of a particular item is in an at-issue domain or a CI domain.

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