Two types of adverbial polarity items in Japanese: absolute and relative

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<Abstract>
This paper investigates the semantics and pragmatics of the Japanese adverbial polarity items zenzen and mattaku and argues that there are two types of adverbial polarity items in Japanese, absolute and relative, which is similar to the case with gradable adjectives (e.g. Rostein and Winter 2004; Kennedy and McNally 2005; Kennedy 2007). Mattaku is absolute in the sense that it denotes an endpoint of scale, while zenzen is relative in the sense that it posits a contextually determined standard and denotes that the actual degree is ‘far removed’ from it. This paper shows that the lexical semantics of adverbial polarity items is diverse (Giannakidou 1998, 2006; Yoshimura 2007).

Key words: adverbial polarity items, absolute vs. relative, scalar implicature, context-dependency

1. Introduction
Japanese reference grammars often state that the adverbs zenzen and mattaku can both serve to ‘strengthen’ the force of an expressed negation (similarly to at all in English):

(1) (Watashi-wa) {zenzen/mattaku} okane-ga nai.
   I -TOP ZENZEN/MATTAKU money-NOM NEG.EXIST
   ‘I don’t have money at all.’

However, mattaku and zenzen are different in terms of polarity and scalarity. In sentence (1), zenzen is natural in a situation where the speaker actually has a little money, whereas mattaku is unacceptable in that situation:

(2) (Context: Taro realized that his banking account has only $10 in it.)
   (Watashi-wa) {zenzen/or matkaku} okane-ga nai
   I -TOP ZENZEN/ at all money-NOM NEG.EXIST
   ‘I don’t have money ZENZEN/at all.’

In this context, sentence (2) is natural if it contains zenzen but is odd if it features mattaku. It seems that the English at all correspond to mattaku. We can summarize this observation as follows:

(3) Descriptive observation:
   ‘Zenzen not P’ implies ‘a little P’ but ‘mattaku not P’ entails ‘completely not P.’ (cf. almost; Sadock 1981)

The purpose of this paper is to investigate the scalar and polar properties of the Japanese ‘at all’ items zenzen and mattaku and argue that, as is the case with gradable adjectives (e.g. Rostein and Winter 2004; Kennedy and McNally 2005; Kennedy 2007), there are two types of adverbial polarity items, an absolute type and a relative type. Mattaku is absolute (context independent) in the sense that it denotes the endpoint of a scale, while zenzen is relative (context dependent) in the sense that it posits a contextually determined standard and denotes that the actual degree is ‘far removed’ from it (i.e. from the expected degree). This distinction can naturally explain why ‘zenzen not P’ has a positive implicature. I argue that the implicature is a scalar implicature (cf. almost; Sadock 1981). I will also focus on cases where zenzen is used in positive assertions. I argue that although the positive zenzen does not occur in a downward entailing or nonveridical contexts, zenzen is indirectly licensed/ rescued (Giannakidou 2006) by its negative presupposition. This paper shows that the lexical semantics of adverbial polarity items is diverse (Giannakidou 1998, 2006; Yoshimura 2007) and that this diversity can be captured in a similar way to other grammatical categories, such as gradable adjectives and degree adverbs.

2. Similarities between zenzen and mattaku
There are some similarities between zenzen and mattaku. One such similarity is concerned with ellipsis (Buchanan 2007):
   John-TOP ZENZEN / at all / that much sake-ACC drink-NEG
   ‘John does not drink sake {ZENZEN/at all/that much}.’

   b. Mary-mo {zenzen /mattaku /*amari} [ e] da
   Mary-also ZENZEN / at all / much PRED
   ‘Mary {does not drink sake} {ZENZEN/at all/that much} either.’

As we can see in (4b), mattaku and zenzen (unlike amari) can precede an ellipsis site (i.e. an environment where ‘V-nai’ is omitted).

Another similarity has to do with pragmatic function. Intuitively, zenzen and mattaku have an ‘emphatic’ meaning in Israel’s (1996) sense. They are different from attenuating NPIs (Israel 1996) such as amari ‘(all) that’:

(5) Taro-wa amari okane-ga nai.
   Taro-TOP all that money-NOM NEG EXIST
   ‘Taro does not have all that much money.’

Amari is an NPI, but unlike mattaku and zenzen, it has a pragmatic function of ‘attenuation’. In (5), the speaker is saying that the actual amount of money does not reach to a contextually determined standard (or expected degree), but it is not very from this standard.

3. Empirical differences between zenzen and mattaku

Despite the similarities discussed in section 2, zenzen and mattaku do not have the same meaning. There are several diagnostics that can be used to distinguish between the two adverbs. The first of these has to do with implicit comparison (Sapir 1944; Kennedy in press; Sawada 2007). In implicit comparison, the truth-value of the proposition in the ‘main clause’ is determined based on the standard of comparison:

(6) (Context: Taro spent $500 shopping, while Ziro spent $10.)
   Taro-ni kurabe-tara Ziro-wa okane-o tukawa-naka-tta.
   Taro-DAT compare-COND Ziro-TOP money-ACC use-NEG-PAST
   ‘Compared to Taro, Ziro didn’t use money.’
   → Ziro spent some money. (implicature)

In (6) there is a positive implicature that ‘Ziro spent some amount of money.’ Notice that mattaku cannot appear in implicit comparison, but zenzen can:

(7) (Context: Taro spent $500 shopping, while Ziro spent $10.)
   Taro-ni kurabe-tara Ziro-wa okane-o {zenzen /??mattaku} tukawa-naka-tta.
   Taro-DAT compare-COND Ziro-TOP money-ACC ZENZEN/ at all (completely) use-NEG-PAST
   ‘Compared to Taro, Ziro didn’t use money {ZENZEN/at all}.’

The second diagnostic has to do with partial negation. A negative sentence with zenzen can precede a partial negation with mattaku, but not vice versa, as shown in (8):

(8) a. Taro-wa zenzen benkyoo-si-nai.
   Taro-TOP ZENZEN study-do-NEG
   ‘Taro does not study ZENZEN.’ (implies: Taro studies a little.)

   Mattaku to iu wake de-wa nai-ga.
   at all (completely) it is not the case that-although
   ‘Although it is not the case that (he does not study) at all (completely).’

   b. Taro-wa mattaku benkyoo-si-nai.
   Taro-TOP at all (completely) study-do-NEG
   ‘Taro does not study at all.’ (=completely zero).

# Zenzen to iu wake de-wa nai-ga.
   ZENZEN it is not the case that-though
   ‘Although it is not the case that (he does not study) ZENZEN.’

In (8a), the flow of discourse is a natural. However, if we exchange the position of zenzen and mattaku in (8a), the result is odd, as shown in (8b). The partial negation ‘Zenzen/mattaku to iu wake de-wa nai’ conveys that ‘Taro studies
a little’, which conflicts semantically with a negative sentence with mattaku, but not one with zenzen.

4. Absolute polarity item vs. relative polarity item
The above discussion shows that zenzen and mattaku are different in terms of the properties of polarity and scale:

(9) ‘Zenzen not P’ implies ‘a little P’ but ‘mattaku not P’ entails ‘not P.’

What does this mean theoretically? I would argue that Japanese adverbial polarity items are lexicalized into two types, an absolute type and a relative type:

(10) a. Zenzen is a relative polarity item, because ‘zenzen not P’ is true iff there is a contextually determined standard with respect to P that is ‘far removed’ from the actual degree with respect to P on the scale of alternatives.

b. Mattaku is an absolute polarity item. It denotes a minimum endpoint of a scale and does not require a contextual standard.

This distinction is similar to that which exists for gradable adjectives and the Dutch even-items zelfs maar and ook maar. As for the gradable adjectives (Kennedy and McNally 2005; Kennedy 2007), relative gradable adjectives like tall require a contextually determined standard (e.g. Tom is tall), while absolute gradable adjectives such as bent do not (e.g. This rod is bent).

As for the Dutch even-items, zelfs maar is associated with a relative presupposition, whereas ook maar is associated with an absolute presupposition (i.e., it concerns an absolute minimum on a scale; Hoeksema and Rullmann (2001: 141)). Notice, however, that zenzen and mattaku are not EVEN items. That is, they are not focus particles that introduce alternatives at the focus site and make scalar and existential presuppositions or conventional implicatures. In the rest of this paper, I would like to verify the idea proposed in (10).

5. Scalar and polar components of zenzen
We can divide the meaning of zenzen into two components, a scalar component and a polarity component (analogously to almost; Sadock 1981; Horn 2002; Nouwen 2006, among many others):

(11) ‘Zenzen not P’ (P = gradable predicate)

Scalar component: the actual degree with respect to P is ‘far’ removed from the contextually determined standard with respect to P

Polar component: P

In ‘mattaku not P’, on the other hand, the actual degree with respect to P is the minimum endpoint of a scale. Therefore, ‘mattaku not P’ entails ‘completely not P.’

6. Scalar component of zenzen and mattaku
This section considers the scalar component of the degree adverbs.

6.1. Proportion in zenzen
I argued above that the notion of ‘distance’ from the contextual standard plays an important role, but ‘distance’ is a vague concept. Let us consider this problem based on the following example:

(12) Zenzen mizu-ga nai.

ZENZEN water-NOM NEGEXIST

‘There is no water at zenzen.’

Imagine the following two situations. In each situation, there is 100 ml of water in a cup.

(13)

Although the amount of water is the same in both situations, sentence (12) is natural for Situation A but odd for
Situation B. How acceptable is sentence (12) if 24% of the cup is filled with water? I can imagine a situation where people say that it is difficult to determine the truth value of the sentence because 24% is a borderline case (for them). This means that the notion of ‘distant’ is vague and there is no cut-off point (sharp boundary) that distinguishes ‘distant’ from ‘not distant.’

6.2. Scalar component of zenzen and mattaku

How can we capture the semantics of ‘zenzen not P’ and ‘mattaku not P’? Before answering to this question, it is necessary to consider a simple negative sentence.

6.2.1. Semantics of the adjectival nai

Let us observe the following sentence:

(14) (Context: the speaker is planning to pay for his/her apartment.)
  Okane-ga nai.
  money-NOM NEG.EXIST
  ‘I don’t have money.’

(14) does not mean ‘I have zero amount of money.’ Instead, it means that ‘the actual amount of money is less than a contextually determined standard’ (e.g. Morita 1994). Traditional Japanese grammars treat nai in (14) as a non-existential adjective (predicative). This nai is different from the affix nai that attaches to a verb stem (e.g. ika-nai ‘not go’), in that the former is an independent word whereas the latter is a dependent word. Here, I assume that the adjectival nai can behave as a ‘relative’ gradable adjective only when it co-occurs with a gradable noun (e.g. money, time, water) (cf. Furukawa 2005). I also assume that the unmodified APs (of type <d, <e,t>>) actually contain a ‘null degree morpheme’ pos whose function is to relate the degree argument of the adjectives to an appropriate standard of comparison (Cresswell 1977; von Stechow 1984; Kennedy and McNally 2005, among others), as shown in (15):

(15) shows the compositional semantics of example (13):

(16) a. \[ \text{nai} = \lambda d \lambda x. \neg (\text{exist}_{\text{gradable}}(x) = d) \]
   b. \[ \text{pos} = \lambda G \lambda x. \exists d [d \geq \text{STAND} \wedge G(d)(x)] \]
   c. \[ \text{pos} (\text{nai}) = \lambda x. \exists d [d \geq \text{STAND} \wedge \neg (\text{exist}_{\text{gradable}}(x) = d)] \]
   d. \[ \text{pos} (\text{nai}) (\text{okane}) = \exists d [d \geq \text{STAND} \wedge \neg (\text{exist}_{\text{gradable}}(money) = d)] \]

Notice that the gradable adjective nai is decomposed into ~ and the gradable use of aru ‘exist.’ Interestingly, the antonym of the adjective nai is the verb aru ‘exist’, which is also a gradable predicate. (16d) shows that the degree to which money exists is less than a contextually determined standard.

Note that the following sentence seems not to have a ‘less than a standard’ meaning:

(17) (Context: the speaker is looking for a bookstore.)
   Honya-ga nai.
   Book store-NOM NEG.EXIST
   ‘There is no bookstore.’ (I cannot find a bookstore.)

Here, nai seems to be interpreted as a simple non-existential predicate (i.e. \[ \lambda x. \neg \text{exist}(x) \]). Notice, however, that if we posit a context in which the speaker is talking about the number of bookstores in a given place, the sentence can be interpreted as ‘the number of bookstores (in the given place) is less than a contextually determined standard.’ Thus the predicative use of nai seems to have two types: a gradable use and non gradable use.
6.2.2. Scalar meaning of zenzen and mattaku

What, therefore, is the meaning of zenzen? I argue that zenzen is a degree morpheme (just like pos) but it has the context-dependent relation ‘less than a standard by large amount (cf. much, Kennedy and McNally 2005). (19) shows the compositional semantics of example (18):

(18) Okane-ga zenzen nai.
    money-NOM ZENZEN NEG .EXIST
    ‘I don’t have money ZENZEN.’

(19) a. [zenzen] = λG,d<,e<G,d(∃x. ∃d<!! STAND ∧ G (d)(x))
    b. [nai] = λd∃x. ¬(exist (x)=d)
    c. [zenzen]( [nai] ) = λx. ∃d [d<!! STAND ∧ ¬(exist (x) =d)]
    d. [zenzen]( [nai] ) ( [okane] ) = ∃d [d<!! STAND ∧ ¬(exist (money) =d)]

Okane-ga zenzen nai (=19d) does not necessarily mean, ‘I have zero money.’ It means ‘I do not have an amount of money that is less than the given standard by a considerable amount.’ Notice that according to the nonotonicity principle, if it is true that the speaker in (17) does not have an amount of money that is less than the standard by a considerable amount (e.g. 5 dollars), it is also true that he/she doesn’t have any larger amount of money (e.g. 6 dollars).

What about the meaning of mattaku? I would argue that the denotation of mattaku can be represented in (19a), where the universal quantifier (∀) is used. (19) shows the compositional semantics of example (18) with mattaku:

(19) a. [mattaku] = λGd.x.G (d)(x)
    b. [nai] = λd∃x. ¬(exist (x)=d)
    c. [mattaku]( [nai] ) = λx. ∃d [d<!! STAND ∧ ¬(exist (x) =d)]
    d. [mattaku]( [nai] ) ( [okane] ) = ∀d [d<!! STAND ∧ ¬(exist (money) =d)]

(19d) means ‘I have zero money.’

There are several important points to note regarding the semantics of zenzen and mattaku. First, we must stipulate that zenzen in (18a) and mattaku in (19a) combine with negation. For example, if zenzen does not combine with negation, the resulting sentence generates a wrong interpretation: ‘I have an amount of money that is far distant from a standard.’

Secondly, we should distinguish the semantics of zenzen from the ‘imprecise’ use of mattaku. One might say that sentence (18) is felicitous even if the speaker has a little money, provided we interpret it as an exaggeration. However, it is important to notice that this is a case of ‘imprecision,’ and that that kind of imprecise meaning is not part of the lexical semantics of mattaku. (For a detailed discussion of imprecision, see Pinkal 1995; Lasershohn 1999; Kennedy and McNally 2005; Barker 2006; Kennedy 2007).

7. Polarity component of zenzen: conversational implicature

Now let us turn our attention to the polarity component of zenzen. As we saw in section 1, ‘Zenzen not P’ implies ‘P.’ I argue that the positive meaning is a conversational implicature, which is derived from the Maxim of Quantity. Let’s verify this idea using two tests, the cancelability test and the detachability test. If the implicature is cancelable and non-detachable, it is a conversational implicature.

First, the implicature is cancelable because the implicature in (20a) can be canceled by (20b):

(20) Cancelability test
       ZENZEN sleep-can-NEG-PAST
       ‘I could not sleep zenzen.’ (I could hardly slept.)
       Implicature → I slept a little.
    b. Touka, mattaku nemur-e-na-katta.
       I mean, MATTAKU sleep-can-NEG-PAST
       ‘I mean, I could not sleep at all (completely).’ (=I slept zero minutes.)

Second, the implicature of zenzen is non-detachable:

(21) Detachability test
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a. **Zenzen** nemur-e-na-katta.
    ZENZEN sleep-can-NEG-PAST
    ‘I could not sleep ZENZEN.’ (=I could hardly sleep.)

b. **Hotondo** nemur-e-na-katta.
    Almost sleep-can-NEG-PAST
    ‘I could hardly sleep.’

(21a) and (21b) have the same semantic content and both convey the same positive implicature: ‘I slept a little.’

Since the implicature is cancelable and non-detachable, it is safe to consider the positive implicature conversational.

The fact that the positive implicature is reinforceable supports this idea:

(22) **Kinoo-wa** zenzen nemur-e-na-katta.
     Yesterday-TOP ZENZEN sleep-can-NEG-PAST
     ‘I could not sleep ZENZEN.’

     **Matta ku** to iu wake de-wa nai-ga.
     at all (completely) it is not the case that
     ‘Although it is not the case that (I did not sleep) at all (completely).’

I would argue that the polarity implicature derives from the Q-Principle ‘Say as much as you can.’ Based on the scale in (23), saying ‘zenzen (not P)’ conversationally implies that ‘it is not the case that mattaku (not P)’:

(23) Scale of completeness
     mattaku (not P)  arrow  zenzen (not P)

8. The positive *zenzen*

Zenzen, but not mattaku, can appear in a positive assertion that contains a ‘relative’ gradable adjective. My analysis can naturally explain why this is the case. Observe the following dialogue:

(24) A: Kono hon -wa omoshiroku-nai-yone?
    This book-TOP interesting-not-CONFIRMATION
    ‘This book is not interesting, right?’

B: {Zenzen /*mattaku} omoshiroi- yo.
    ZENZEN/ MATTAKU interesting-INTERJECTION
    ‘It IS interesting.’

There is no endpoint on the scale of ‘interestingness’. Since zenzen, but not mattaku, is relative and it does not denote an endpoint of a scale, it can be used with an upward directed scale that lacks an endpoint. The denotation of (24B) with zenzen can be represented as follows:

(25) \[ \text{zenzen_{POS}} (\text{omoshiroi} \text{]) = } \lambda x. \exists d \text{ [d>!! STAND } \land \text{ interesting (x) = d]} \]

There is a question as to whether the positive *zenzen* is a polarity item. The question arises because the positive zenzen has neither a downward entailing context nor a nonveridical context (i.e., zenzen is not in the scope of some nonveridical operators such as questions, modals, and imperatives). But I would argue that the positive zenzen can still be considered a polarity item because it has the following negative presupposition:

(26) **Negative presupposition of the positive zenzen:**
    ‘Zenzen P’ presupposes that P is considered to be false of the subject (i.e. the book) for the addressee in speaker’s individual epistemic model.

Thus (24B) becomes odd if it is uttered in an out-of-the-blue context (Arimitsu 2002; Odani 2007):

(27) (Out-of-the-blue context)
    # Zenzen omoshiroi- yo.
    ZENZEN interesting-INTERJECTION
    ‘It IS interesting.’
Therefore, it is possible to consider that *zenzen* is rescinded (or ‘indirectly’ licensed) (Giannakidou 1998, 2006) by its negative presupposition (i.e. (26)).

9. Conclusion and theoretical implications

In this paper, I have argued that similarly to gradable adjectives (Rosten and Winter 2004; Kennedy and McNally 2005; Kennedy 2007), there are two types of (scalar use of) adverbial polarity items in Japanese, absolute and relative. *Mattaku* is absolute in the sense that it denotes an endpoint of scale, while *zenzen* is relative in the sense that it posits a contextually determined standard and denotes that the actual degree is ‘far removed’ from this contextually determined standard. I argued that this distinction can naturally account for the reason why *zenzen* P, but not *mattaku* P, has a positive implicature. The proposed analysis can also explain why, *zenzen* can appear in a positive assertion whose scale does not have a maximum endpoint. In terms of polarity sensitivity, I argue that the positive *zenzen* can still be regarded as a polarity item because it has a negative presupposition.

Finally, let’s consider the above analyses from a broader perspective. What do these analyses imply for polarity theory in general? It has been claimed that the base meaning of PIs requires an ‘even like’ flavor (Heim 1984; Kadmon and Landman 1993; Lee and Horn 1994; Lahiri 1998; Chierchia 2006). For example, Lahili (1998) proposes that NPIs behave like the scalar focus particle *even* (Rooth 1985) because the sentence *there isn’t even any student* is interpreted roughly as *there isn’t even one student*. However, although this approach can account for the meaning of *mattaku*, it does not explain *zenzen*. “Mattaku not P” can be paraphrased by *mo* ‘even’, but *zenzen* cannot necessarily be paraphrased by *mo*:

(28) a. Toori-ni-wa mattaku hito-ga i-nai.
   Street-LOC-TOP MATTAKU person-NOM exist-NEG
   ‘There is no one at all in the street.’
   (Must be zero people.)

b. Toori-ni-wa zenzen hito-ga i-nai.
   Street-LOC-TOP ZENZEN person-NOM exist-NEG
   ‘There is no one ZENZEN in the street.’
   (OK even if there are 2-3 people.)

(29) Toori-ni-wa hito-ri -mo (hito-ga) i-nai.
    Street-LOC-TOP one-NCL (person)-even person-NOM exist-NEG
    ‘There is not even ONE person in the street.’

(28a) can be paraphrased by (29), but (28b) cannot necessarily be paraphrased by (29). This means that the adverbial polarity items cannot be reduced to a single semantic source, viz. *even*. The speaker is not using *zenzen* in order to express that even the most liberal (i.e. broadest) choice of domain makes the sentence true. I proposed that *zenzen*’s emphatic meaning arises from a notion of ‘distance.’ Although both *mattaku* and *zenzen* involve the meaning of scalarity, we cannot say that their semantics are the same. This paper showed that the semantics of polarity items are diverse (Giannakidou 2006; Yoshimura 2007) just like the semantics of other grammatical categories, like adjectives.

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Notes

1 Since I am not sure *zenzen* can be paraphrased by the English expression *at all*, I will gloss *zenzen* as ZENZEN.
2 There are multiple approaches to the phenomenon of vagueness, e.g. fuzzy logic, supervaluationism, and the epistemic view. Here, I prefer to use the notion of vagueness in a theory-neutral way.
3 The fact that *nai* can appear in comparatives also supports the idea that it can behave as a gradable adjective:

(i) Taro-wa Hanako-yori okane-ga nai.
    Taro-TOP Hanako-than money-NOM NEGEXIST
    ‘Taro has less money than Hanako.’
Recall that nai can also behave as an affix that attaches to a verb stem. I consider the affixal nai is different from the independent word nai in that the former just denotes a truth-functional negation. Of course, if the affixal nai is attached to a gradable verb, we can get the ‘less than a standard’ meaning. In this case, the context-dependent meaning comes from the meaning of the gradable verb.

Zenzen and hotondo do not have the same meaning. The negative use of hotondo posits a minimum standard (in this case zero minutes) and denotes that the actual degree is not equal to the minimum standard. Notice that, unlike English almost, hotondo cannot modify existential quantifiers (Furukawa 2005). Thus hotondo cannot modify a numeral (*hotondo 10-nin ‘almost 10-people’). I would argue that this is because hotondo always posits a standard that corresponds to an endpoint (a minimum in the case of a negative sentence and maximum in the case of a positive sentence). For example, the truth condition of sentence (20b) can be represented as follows:

\[(\text{hotondo}_{\text{NEG}})(\text{could not sleep}) = \lambda x. \exists d \ [d = \text{minimum standard} \land \neg \text{(could sleep}(x) = d)]\]

By negating the idea that ‘the degree to which I could sleep is zero minutes’, we get the (scalar) implicature that ‘I could sleep a little.’ I treat the verb nemur-e-ta ‘could sleep’ as ‘gradable’, whose denotation is ‘\(\lambda d. \text{could sleep}(x) = d\)’. That is to say, nemur-e-ta maps its degree argument onto abstract representations of measurement. This idea is supported by the fact that the verb can combine with a degree words like yoku ‘well’ or measure phrases such as 1-jikan ‘1 hour’. When there is no explicit degree morpheme, pos is attached to the verb to relate the degree argument of the gradable verb to a contextually determined standard.

This predicts that if an upward directed scale has an endpoint, the sentence with mattaku becomes okay:

(i) Mattaku heiki-da.

Completely all right-pred

‘I am completely all right.’

References

Arimitsu, N. 2002. “Hiteiteki bunmyaku to hitei kyokusei koumoku ni kansuru iti-kousatsu: not at all vs. zenzen o tyuusinni.” (Notes on Negative Context and Negative Polarity Items: not at all vs. zenzen). Gengo kagaku ronsyu 8 (Studies of Linguistic Science), 63-80.


Kennedy, C. In press. “Modes of Comparison.” In *Papers from the 43rd Annual Meeting of the Chicago Linguistic Society*.


Rooth, M. *Association with Focus*. Ph.D. Dissertation, University of Massachusetts.


