Scalar properties of Japanese and English sense-based minimizers

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Abstract. The Japanese minimizers *kasukani* 'faintly' and *honokani* 'approx. faintly' and the English minimizer *faintly* are similar to typical minimizers, such as the Japanese *sukoshi* 'a bit' and English *a bit*, in that they semantically represent a low degree. However, their meanings and distribution patterns are not the same. I argue that *kasukani*, *honokani*, and *faintly* are sense-based minimizers in that they not only semantically denote a small degree but also convey that the judge (typically the speaker) measures degree based on his/her own sense (the senses of sight, smell, taste, etc.) at the level of conventional implicature (CI) (e.g., Grice 1975; Potts 2005; McCready 2010; Gutzmann 2011). It will be shown that this characteristic restricts sense-based minimizers to occur only in a limited environment. This paper also shows that there are variations among the sense-based minimizers with regard to (i) the kind of sense, (ii) the presence/absence of evaluativity, and (iii) the possibility of a combination with an emotive predicate, and will explain them in the non-at-issue domain. In analyzing the meaning of sense-based minimizers, the relationship between a sense-based minimizer and a predicate of personal taste (e.g., Pearson 2013; Ninan 2014; Kennedy & Willer 2019; Willer & Kennedy 2019) will also be discussed.

Keywords. sense-based minimizer; scalarity; conventional implicature; experience; cross-linguistic/language internal variation

1. Introduction. It seems that minimizers in Japanese and English are of two types: typical and non-typical minimizers. For example, English *a bit*/*a little*/*slightly* and Japanese *sukoshi*/*chotto*/*wazukani* seem to be typical minimizers, while English *faintly* or Japanese *kasukani* 'faintly' and *honokani* 'faintly' seem to belong to non-typical minimizers:

(1)   Typical minimizers
      a.   English: *a bit*, *a little*, *slightly*
      b.   Japanese: *sukoshi* 'a bit', *chotto* 'a bit', *wazukani* 'slightly'.

(2)   Non-typical minimizers
      a.   English: *faintly*
      b.   Japanese: *kasukani* 'faintly', *honokani* 'faintly',

    Both typical and non-typical minimizers semantically represent a low degree. However, their distribution patterns are not the same. Similar to typical minimizers, *faintly*, *kasukani*, and *honokani* can co-occur with gradable predicates such as *sweet*/*amai* 'sweet':

(3)   a.   This green tea is {a bit / faintly} sweet.

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b. Kono sake-wa   {sukoshi / kasukani / honokani} amai
This sake-TOP a bit   / faintly   / *honokani* sweet
'This sake is {a bit/faintly} sweet.'

However, unlike typical minimizers, *faintly*, *kasukani*, and *honokani* cannot co-occur with gradable predicates, such as *expensive/takai* 'expensive':

(4)   a.   This coffee is {a bit / #faintly} expensive.
       b.   Kono koohii-wa   {sukoshi / #kasukani / #honokani} takai.
             This coffee-TOP a bit   / faintly   / *honokani*   expensive
             'This coffee is {a bit/#faintly} expensive.'

How can we explain the distributional differences between typical and non-typical minimizers?

In this paper, I will argue that unlike typical minimizers, *faintly*, *kasukani*, and *honokani* are sense-based minimizers in that they induce a conventional implicature (Grice 1975; Potts 2005) that the judge (typically the speaker) measures degree based on his/her own sense (the senses of sight, smell, taste, etc.). More theoretically, I will analyze that they are mixed content (e.g. McCready 2010; Gutzmann 2011) in that they not only have an at-issue scalar meaning of 'slightly greater than a minimum' but also have this CI meaning. It will be shown that the CI meaning of the sense-based minimizers restricts the context and environment in which they can naturally be used.

An interesting point is that there are variations among the sense-based minimizers with regard to (i) the sense by which a measurement can be made, (ii) the presence/absence of evaluativity, and (iii) whether they can also quantify over an emotive predicate. I will explain these by assuming that each sense minimizer has a different (selectional) restriction in the non-at-issue domain.

This paper suggests that there are two types of minimizers in natural language: a "neutral minimizer'' that does not lexically specify the source of measurement; and a "sense-based minimizer'' that lexically specifies the source of measurement (i.e., specifies that the measurement is made based on a judge's sense). In analyzing the meaning of sense-based minimizers, the relationship between a sense-based minimizer and predicates of personal taste will also be discussed.

2. The meaning of Japanese *kasukani* 'faintly'. Let us first consider the meaning and distribution of Japanese *kasukani* 'faintly', which will be a foundation for considering other types of sense-based minimizers.

2.1. *Kasukani* IS SENSE-BASED. As the following examples show, *kasukani* can combine with various kinds of expressions that involve senses:

(5)   (Sense of taste)

       Kono sake-wa   {kasukani/sukoshi} amai.
       This   sake-TOP faintly/a bit   sweet

       'This sake is faintly sweet.'

(6)   (Sense of smell)

   Minto-ga   {kasukani / sukoshi} kaoru.
   Mint-NOM faintly   / a bit   smell
   'It smells faintly/a bit of mint.'

(7)   (Sense of hearing)

   Chapel-no   kane-ga   {kasukani / sukoshi} kiko-e-ru.
   Chapel-GEN bell-NOM faintly   / a bit   hear-can-NON.PST
   'The sound of the chapel bell is faintly heard.'

(8)   (Sense of sight)

   Fuji-san-ga   {kasukani / sukoshi} mi-e-ru.
   Fuji-Mount-NOM faintly   / a bit   see-can-NON.PST

   'Mt. Fuji is faintly/a bit visible.'

(9)   (Sense of touch)

   Totte-ga   mada {kasukani / sukoshi} atatakai.
   Handle-NOM still   faintly   / a bit   warm
   'The handle is still faintly/a bit warm

   Note, however, that, as we observed earlier, *kasukani* cannot combine with a gradable predicate that does not have to do with sense, as in (10):

(10)   Kono koohii-wa   {sukoshi / #kasukani} takai.
    This coffee-TOP a bit   / faintly   expensive
    'This coffee is {a bit/#faintly} expensive.'

This predicts that if a speaker does not have direct experience of a sense, (s)he cannot use *kasukani*. As the following examples show, this prediction is borne out. (11) is natural because the speaker measures the degree of sweetness based on his/her own sense.

(11)   (Context: The speaker is drinking coffee.)

   Kono koohii-wa   {kasukani / sukoshi} amai.
   This coffee-TOP faintly   / a bit   sweet
   'This coffee is faintly/a bit sweet.'

In contrast, (12) with *kasukani* sounds odd because the speaker does not measure the degree of sweetness of coffee based on the speaker's own sense:

(12)   (Context: The speaker is looking at a label. According to the label, on a scale of 1 to 5, the sweetness of the coffee is 1.)

   Kono koohii-wa   {#kasukani / sukoshi} amai-desu.
   This coffee-TOP faintly   / a bit   sweet-PRED.POLITE
   'This coffee is #faintly/a bit sweet.'

   Note that if a speaker is looking at a label that explicitly says "this coffee is faintly sweet'', then the sentence with *honokani amai* sounds natural.

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(13) (Context: The speaker is looking at a coffee description that says that it is faintly sweet.)

Mite, kono koohii-wa   honokani amai-yo.
Look this   coffee-TOP *honokani* sweet-PRED.POLITE
'Look , this coffee is faintly sweet.'

I consider this sentence to be metalinguistic as opposed to a pure measurement. The speaker is not measuring degrees themselves, but states a fact furnished by another.

The above discussion suggests that *kasukani* is very similar to predicates of personal taste, which require direct experience (e.g., Pearson 2013; Ninan 2014; Kennedy & Willer 2019; Willer & Kennedy 2019), particularly a sense-related predicate of personal taste, such as *tasty*:[1]

(14) a.   This coffee is tasty.
      b.   This sushi is delicious.

For example, Pearson (2013) describes the requirement of direct sensory experience in the predicates of personal taste as follows:

(15) In order to assert that *x* is *P* for some taste predicate *P*, one typically must have direct sensory experience of the relevant kind on the basis of which to judge whether *x* is *P*. [...] To assert that *shortbread is tasty*, I must have tasted shortbread. If I have good reason to believe that shortbread is tasty, say because a reliable expert has told me so, I might say, *Apparently, shortbread is tasty*, but not, *Shortbread is tasty*. (Pearson 2013; 117)

In the following sections (especially in Section 2.6 and the Conclusion), we will discuss the similarities and differences between a predicate of personal taste and a sense-based minimizer when they become relevant. As discussed in Section 2.6, a sense-based minimizer and predicate taste *oishii* 'tasty' do not naturally co-occur.

2.2. THE EXAMPLE WITH *kanjiru* 'FEEL'. Thus far, we have considered examples where *kasukani* measures degree based on a specific sense. However, there are also cases in which sense is not specified. For example, in (16), where the main predicate *kanjiru* 'feel' is used, it is not clear under which sense the speaker is measuring:

(16) Aki-no   kehai-o   kasukani kanjiru.
      Autumn-GEN sign-ACC faintly   feel
      'I feel a faint sign of autumn.'

In this case, depending on the context/situation, a relevant sense can be sight, smell, touch, etc.

Note that a measurement by multiple senses is also possible when the main predicate is *kanjiru* 'feel':

(17) (Conjoined case, multi-sense)

Yuzu-no   kaori-to   sanmi-o   kasukani kanjiru.
Citrus-GEN perfume-and acidity-ACC faintly   feel
'I feel the perfume and acidity of citrus faintly.'

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[1] A predicate such as *fun* is also considered to be a typical example of a personal taste (see, e.g., Lasersohn 2005), but it seems that unlike *tasty*, *fun* is not dependent on a particular sense.

Here, the degree of *kanjiru* 'feel' is measured based on the senses of smell and taste.[2]

2.3. THE USE OF *kasukani* CONCERNING 'MEMORY'. *Kasukani* can also be used for measuring the degree of memory:

(19) Kodomo-no toki koko-ni ki-ta-koto-o   kasukani oboe-teiru.
      Child-GEN time here-to come-PST-thing-ACC faintly   remember-STATE
      'I faintly remember that I came here when I was a child.'

The degree of memory is not measured based on a physical sense, but in this study, I assume that memory is also connected to sense.[3]

2.4. THE NON-AT-ISSUE (CI) PROPERTY OF *kasukani*. Let us now consider the status of the meaning of *kasukani*. I argue that *kasukani* induces a conventional implicature (Grice 1975; Potts 2005) that the judge (typically the speaker) measures degree based on his/her own sense (sight, smell, taste, etc.). More specifically, I assume that *kasukani* 'faintly' is mixed content in that it has an at-issue scalar meaning and the CI (McCready 2010; Gutzmann 2011) inside the lexical items:

(21) *Kasukani* (i) denotes that the degree of a target x is slightly greater than zero (= a minimum standard) on the scale of G in the at-issue component (= truth-conditional component). In addition, it (ii) conventionally implicate that the judge (typically the speaker) measures degree based on his/her own sense of sight, smell, taste, or hearing.

In the Gricean pragmatics, CIs are considered a part of the meaning of words, but they are independent of "what is said" (at-issue meaning) (e.g., Grice 1975; Potts 2005; McCready 2010; Gutzmann 2011; Sawada 2010, 2018). Furthermore, it is often assumed that CIs are speaker-oriented by default (Potts 2007).

The experiential component is a CI because it is independent of "what is said'' (at-issue meaning). This is supported by the fact that it is impossible to reject the experience by saying, "No, that's false.''

(22) A: Kono koohii-wa kasukani amai.
          This coffee-TOP faintly   sweet
          At-issue: The degree of sweetness of this coffee is slightly greater than zero.
          CI: I am measuring degree based on my sense of taste.

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[2] Note that the following example is odd because the first and second parts are unrelated:

(18) (Conjoined case, non-multi-sense)

      # Aijou-to kaori-o   kasukani kanjiru.
        Love-and perfume-ACC faintly   feel
        'I feel the love and perfume faintly.'

[3] The adjective *kasukana* 'faint' can also modify the noun *kanousei* 'possibility':

(20) Kasukana kanousei-ga   noko-tteiru
      Faint   possibility-NOM leave-STATE
      'There remains a faint possibility.'
      I would like to put this case aside.

B: Iya sore-wa uso-da.   Mattaku amaku-nai-yo.
No that-TOP false-PRED at all   sweet-NEG-Prt
'No, that false. It is not sweet at all.'

(23)   A: Kono koohii-wa   kasukani amai.
This coffee-TOP faintly   sweet
At-issue: The degree of sweetness of this coffee is slightly greater than zero.
CI: I am measuring degree based on my sense of taste.
B: Iya sore-wa   uso-da.   Anta-wa mikaku-de kanji-te i-nai.
No that-TOP false-PRED You-TOP taste-with feel-TE be-NEG
'No, that is false. You are not feeling based on the sense of taste. '

Another piece of evidence for the idea that *kasukani* has a CI and is logically independent of "what is said'' comes from the fact that the experiential meaning semantically projects even if *kasukani* is embedded under the verb *omou* 'think' or the modal *kamoshirenai* 'may':

(24)   (Context: The speaker is drinking coffee.)
a.   Kono koohii-wa   kasukani amai-to   omou.
This coffee-TOP faintly   sweet-that think
'I think that this coffee is faintly sweet.'
(CI: I am measuring degree based on my sense of taste.)
b.   Kono koohii-wa   kasukani amai-kamoshirenai.
This coffee-TOP faintly   sweet-may
'This coffee may be faintly sweet.'
(CI: I am measuring degree based on my sense of taste.)

The CI components of (24) are not within the semantic scope of *omou* 'think' or *kamoshirenai* 'may'.

Note that although *kasukani* is typically speaker-oriented, the perspective can shift. For example, if it is embedded under an attitude predicate and the subject of the sentence is a third person, the judge of *kasukani* is the subject (i.e., the attitude holder):

(25)   Hanako-wa   kono wain-wa   kasukani amai-to   omotteiru.
Hanako-TOP this   wine-TOP faintly   sweet-that think
'Hanako thinks that this wine is faintly sweet.

Furthermore, if *kasukani* co-occurs with a hearsay evidential such as *rashii* 'I hear', then the judge of *kasukani* is someone who reported that the wine is faintly sweet, as shown in:

(26)   Kono wain-wa   kasukani amai-rashii.
This wine-TOP faintly   sweet-EVID
'I heard that this wine is faintly sweet.'

Although Potts (2005) claims that CIs are always speaker-oriented, various scholars have claimed that CI expressions such as expressives can have a non-speaker orientation (e.g., Amaral et al. 2007; Potts 2007; Harris & Potts 2009). I consider that this also applies to *kasukani*.[4]

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[4] In this paper I will not consider the experiential component of *kasukani* a presupposition. It is a judge's personal experience (typically a speaker's experience), and it is not something that is shared between a speaker and a hearer.

2.5. FORMAL ANALYSIS. Let us now consider how the meaning of *kasukani* can be analyzed formally using the following example:

(27)   Kono sake-wa   kasukani amai.
       This sake-TOP faintly   sweet
       'This sake is faintly sweet.'

In this paper, I will analyze the meaning of sense-based minimizers based on multidimensional semantics (Potts 2005) in which both an at-issue meaning and a CI meaning are compositional but are interpreted along different dimensions (i.e., an at-issue dimension and a CI dimension). More specifically, I use the logic of mixed content to analyze the meaning of mixed content (McCready (2010) and Gutzmann (2012)). In this system, the meaning of mixed content is computed via a mixed application as follows:

(28)   (Mixed application)

$$\alpha(\gamma) \blacklozenge \beta(\gamma) : \tau^a \times \upsilon^s$$

$$\alpha \blacklozenge \beta : \langle \sigma^a, \tau^a \rangle \times \langle \sigma^a, \upsilon^s \rangle \quad \gamma : \sigma^a$$

(Based on McCready 2010)

The at-issue component is to the left of $\blacklozenge$, and the non-at-issue component/CI is to the right. Superscript *a* stands for an at-issue type, and superscript *s* stands for a shunting type, which is used for the semantic interpretation of a CI involving an operation of shunting.[5]

When the derivation of the CI component of mixed content completes, the following rule applies for the final interpretation of the CI part:

(29)   Final interpretation rule: Interpret $\alpha \blacklozenge \beta$: $\sigma^a \times t^s$ as follows: $\alpha : \sigma^a \bullet \beta : t^s$ (Based on McCready (2010))

Based on the above setup, I propose that *kasukani* has the following meaning (*j* stands for a judge and "$\gtrapprox STND_{MIN}$" stands for slightly greater than a minimum standard of *G*):

(30)   [[kasukani]] : $\langle \langle d^a, \langle e^a, t^a \rangle \rangle, \langle e^a, t^a \rangle \rangle \times t^s = \lambda G_{\langle d, \langle e, t \rangle \rangle} \lambda x. \exists d[d \gtrapprox STND_{MIN} \wedge G(d)(x)] \blacklozenge$
       j measures degree based on *j*'s sense of {vision (color) /smell/taste/hearing/memory}.

As for the meaning of gradable predicates, I assume that they represent relations between individuals and degrees (Seuren 1973; Cresswell 1977; von Stechow 1984; Klein 1991; Kennedy

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[5] The following figure shows the shunting application:
   (i) The shunting application (Based on McCready 2010)

$$\alpha(\beta) : \tau^s$$

$$\alpha : \langle \sigma^a, \tau^s \rangle \quad \beta : \sigma^a$$

The shunting application is different from Potts's (2005) CI application in that it is resource-sensitive. Potts's CI application is resource-insensitive, as shown in (ii):
   (ii) CI application (Potts 2005)

$$\beta : \sigma^a$$
$$\bullet$$
$$\alpha(\beta) : \tau^c$$

$$\alpha : \langle \sigma^a, \tau^c \rangle \quad \beta : \sigma^a$$
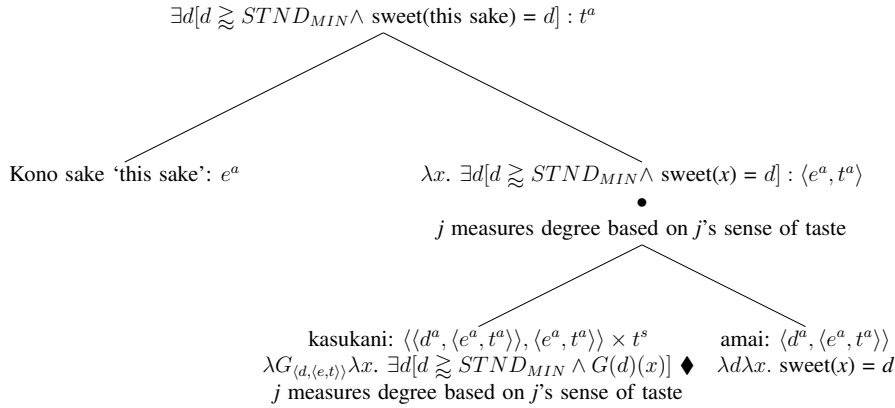
The superscript *c* represents the CI type, which is used for CI application. Here, the α of $\langle \sigma^a, \tau^c \rangle$ takes a β of type σ^a and returns τ^c. Simultaneously, a β is passed on to the mother node.

2007):

(31)   [[sweet/amai]]: $\langle d, \langle e, t \rangle \rangle = \lambda d \lambda x.\ \text{sweet}(x) = d$

 Kasukani and *amai* are combined via mixed application. Note that since the CI component of *kasukani* is complete (i.e., its denotation is of type t^s), *kasukani* takes the argument *amai* only at the at-issue component. Figure (32) shows the logical structure of Sentence (27).

(32)   The logical structure of (31)

$$\exists d[d \gtrapprox STND_{MIN} \wedge \text{sweet(this sake)} = d] : t^a$$

Kono sake 'this sake': e^a $\lambda x.\ \exists d[d \gtrapprox STND_{MIN} \wedge \text{sweet}(x) = d] : \langle e^a, t^a \rangle$

               •

             j measures degree based on *j*'s sense of taste

kasukani: $\langle \langle d^a, \langle e^a, t^a \rangle \rangle, \langle e^a, t^a \rangle \rangle \times t^s$ amai: $\langle d^a, \langle e^a, t^a \rangle \rangle$

$\lambda G_{\langle d, \langle e, t \rangle \rangle} \lambda x.\ \exists d[d \gtrapprox STND_{MIN} \wedge G(d)(x)]$ ♦ $\lambda d \lambda x.\ \text{sweet}(x) = d$

j measures degree based on *j*'s sense of taste

2.6. EXPLAINING THE DISTRIBUTION PATTERN OF *kasukani*. Let us consider how our approach can explain the distribution patterns of *kasukani*. As we observed, *kasukani* cannot combine with regular gradable adjectives such as *takai* 'expensive' and *ookii* 'big':

(33)   Kono koohii-wa {sukoshi / #kasukani} takai.
   This coffee-TOP a bit   / faintly   expensive
   'This coffee is {#faintly/a bit} expensive.'

(34)   Kono teeburu-wa kodomo-ni-wa {sukoshi / #kasukani} ookii.
   This table-TOP child-to-TOP a bit   / faintly   big
   'This table is {#faintly/a bit} big for a child.'

 I consider that *kasukani* cannot combine with relative gradable predicates such as *takai* 'expensive' and *ookii* 'big', not just because (i) they are not sense-based, but because (ii) they posit a contextual standard. *Kasukani* (i) denotes that the degree of a target *x* is slightly greater than a "minimum standard'' on the scale of *G* in the at-issue component. The idea that the scale structure of an adjective plays an important role is supported by the fact that *kasukani* cannot naturally combine with the gradable predicates such as *oishii* 'delicious' or *urusai* 'noisy' despite the fact that they are related to sense (taste/hearing):

(35)   # Kono keeki-wa kasukani oishii.
    This cake-TOP faintly   delicious
   'This cake is faintly delicious.'

(36)   # Kono heya-wa   kasukani urusai.
    This room-TOP faintly   noisy
   'This room is faintly noisy.' (cf., *Oto-ga kasukani kiko-e-ru* 'the sound is faintly heard'.)

Oishii 'delicious' and *urusai* 'noisy'are so-called predicates of personal taste, which require direct sensory experience (e.g., Pearson 2013; Ninan 2014; Kennedy & Willer 2019). I would

like to consider that *kasukani* cannot be combined with *oishii* 'delicious' or *urusai* 'noisy' because these adjectives are relative gradable adjectives that posit a contextual standard (norm) and cannot measure degrees from a minimum point. Whether something is tasty is determined by a contextually determined norm. By contrast, *kasukani* is fine with the adjective *amai* 'sweet' or *akai* 'red', because they are absolute adjectives that posit a zero point.[6]

3. Japanese *honokani*. We focused above on the Japanese *kasukani*. In this section, we consider another Japanese sense-based minimizer, *honokani* (see also Oki 1983). Although *honokani* is similar to *kasukani* in that it is sense-based, there are also some differences between them. First, the use of *honokani* is more restricted than *kasukani*. As the following examples show, *honokani* can measure degrees based on the senses of sight (color), taste, smell, touch:

(37) a. Akari-ga   honokani mi-e-ru.   (Sense of sight)
          Light-NOM *honokani* see-can-NON.PST
          'The light is faintly visible.'
    b. Kono sake-wa   honokani amai. (Sense of taste)
          This   sake-TOP *honokani* sweet
          'This sake is faintly sweet.'
    c. Minto-ga   honokani kaoru.   (Sense of smell)
          Mint-NOM *honokani* smell.good
          'It smells faintly of mint.'
    d. Totte-ga   mada honokani atatakai. (Sense of touch)
          Handle-NOM still   *honokani* warm
          'The handle is still faintly warm.'

However, *honokani* cannot measure sound and at least for some native speakers, it is a bit odd to measure the degree of memory based on *honokani*:

(38) Oto-ga   {kasukani /#honokani} kiko-e-ru.   (Sense of hearing)
      Sound-NOM faintly   */honokani*   hear-can-Non.PST
      The sound is faintly heard.

(39) (Sense of memory)

      Kodomo-no toki-no-koto-o   {kasukani /?honokani} oboe-teiru.
      Child-GEN time-GEN-thing-ACC faintly   */honokani*   remember-STATE

      'I faintly remember that I came here when I was a child.'

Second, unlike *faintly/kasukani*, *honokani* has a positive evaluative meaning. As the following examples show, it is odd to use *honokani* if a predicate does not have a positive meaning:

(40) a. Kono ocha-wa   honokani amai. (Sense of taste)
          This   green tea-TOP *honokani* sweet
          'This green tea is faintly sweet.'
    b. #Kono ocha-wa   honokani nigai. (Sense of taste)
          This   green tea-TOP *honokani* bitter
          'This green tea is faintly bitter.'

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[6] More detailed discussion will be necessary for the meanings and scale structures of *amai* 'sweet' and *akai* 'red'.

(41)　(Sense of smell)

    a.　Minto-ga　honokani kaoru.
       Mint-NOM *honokani* smell.good
       'It smells faintly of mint.'

    b.　#Gomi bako-ga　honokani niou.
       Dust　box-NOM *honokani* smell
       'The garbage box smells faintly.'

These two differences suggest that *honokani* has a more restricted non-at-issue/CI meaning: *Honokani* conventionally implies that a judge *j* measures degree based on a sense of brightness, perfume, or sweetness, and *j* evaluates the experience positively (cf. *kasukani* in (42b):[7]

(42)　a.　$[[\text{honokani}]]=\lambda G_{\langle d,\langle e,t\rangle\rangle}\lambda x. \exists d[d \gtrsim STND_{MIN}\wedge G(d)(x)]\blacklozenge$ *j* measures degree based on *j*'s sense of {brightness/perfume/sweetness/warmth} $\wedge$ *j* evaluates the experience positively.

    b.　$[[\text{kasukani}]]=\lambda G_{\langle d,\langle e,t\rangle\rangle}\lambda x. \exists d[d \gtrsim STND_{MIN}\wedge G(d)(x)]\blacklozenge$ *j* measures degree based on *j*'s sense of {vision (color) /smell/taste/hearing/touch/memory}.

The sense of brightness, perfume, or sweetness is more specific than the sense of vision, smell, or taste. The positive evaluative component seems to be connected to a specific sense.

4. English *faintly*. Finally, let us consider the meaning and distribution of English *faintly*.

4.1. SENSE AND EMOTION. English *faintly* is similar to Japanese *kasukani* and *honokani* in that it has a sense-based meaning:

(43)　a.　This green tea is faintly sweet. (Sense of taste)
    b.　It smells faintly of mint. (Sense of smell)
    c.　The sound of the chapel bell is faintly heard. (Sense of hearing)
    d.　Mt. Fuji is faintly visible. (Sense of sight)
    e.　The barrel is still faintly warm. (Sense of touch)
    f.　This face is faintly familiar. (Sense of memory

Similar to the other sense-based minimizers, *faintly* cannot combine with regular relative gradable predicates such as *expensive* and *tall*.[8]

(44)　a.　#This wine is faintly expensive.
    b.　#This desk is faintly tall for a kid.

However, interestingly, *faintly* can also combine with an emotive predicate:

(45)　a.　faintly ridiculous
    b.　faintly surprised

This characteristic is not found in *kasukani* or *honokani*:

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[7] The Japanese adverb *honnori* has the same semantic characteristics as *honokani*.

[8] One of the abstract reviewers and a participant of LSA 2021 suggested that examples such as "The violin sounds faintly expensive'' and "This wine is faintly expensive'' could be natural if the judge has some knowledge of how acoustic properties of a violin/qualities of a wine map to the expensiveness of the violin/wine.

(46) a. #{kasukani / honokani} bakageteiru
      faintly   / *honokani* ridiculous
      'intended. faintly ridiculous'
   b. #{kasukani / honokani} odoroita
      faintly   / *honokani* surprised
      'intended. faintly surprised'

Note that *Oxford Sentence Dictionary* describes *faintly* used with an emotive predicate as a dialectal feature of British English:

(47) a. His faintly ridiculous air. (OSD, Dialect, British English)
   b. I looked at the poster again and had to agree that it did look faintly ridiculous. (OSD, Dialect, British English)
   c. There is something faintly surreal about eating in an empty restaurant. (OSD, Dialect, British English)

4.2. CORPUS DATA OF *faintly* AND THE POSSIBLE ANALYSES. To understand the distributional tendency of *faintly* and whether it is dialectal, I examined the collocations of "faintly + ADJECTIVE" in the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA).[9]

As for BNC, we found the following results for the top 20 adjective collocates with *faintly* (among 100)(the data below the table are examples from BNC):

Adjective	Frequency	Adjective	Frequency
1. ridiculous (emotion)	10	11. disappointed (emotion)	4
2. surprised (emotion)	9	12. luminous (sense)	4
3. amused (emotion)	8	13. ludicrous (emotion)	4
4. mocking (emotion)	7	14. golden (sense)	4
5. familiar (sense, memory)	7	15. malicious (emotion)	4
6. visible (sense)	6	16. puzzled (emotion)	4
7. embarassed (emotion)	5	17. sinister (emotion)	4
8. sick (emotion)	5	18. annoyed (emotion)	3
9. aware (sense, recognition)	4	19. hostile (emotion)	3
10. absurd (emotion)	4	20. green (sense)	3

Table 1. BNC, Top 20 adjective collocates with *faintly* (among 100) (February 12, 2020)

(48) a. With a single look she had made him feel faintly ridiculous. (ridiculous, BNC)
   b. Everyone looked faintly surprised, for I hadn't previously volunteered a remark. (surprised, BNC)
   c. The blond man looked faintly amused. (amused, BNC)
   d. He turned then to look at her, his expression faintly mocking. (mocking, BNC)
   e. Thierry... Guizot... CDF... the names are all faintly familiar, and have a serious look about them. (familiar, BNC)

[9] The British National Corpus (BNC) is designed to represent a wide cross-section of British English, both spoken and written, from the late twentieth century. (http://www.natcorp.ox.ac.uk/). The Corpus of Contemporary American English (COCA), on the other hand, is a large, genre-balanced corpus of American English (https://www.english-corpora.org/coca/).

f. The light trained on his bed snaps off. He remains faintly visible. (visible, BNC)

g. As he looked at her, his face closed over with a faintly embarrassed incredulity. (embarrassed, BNC)

h. The mere idea made her feel faintly sick, as well as excited, but not sick enough to refuse the apple pie and cream when it came. (sick, BNC)

i. Grainne was only faintly aware of Raynor at her side now. (aware, BNC)

j. We all sat hunched and unspeaking. I guessed it was because everyone felt faintly absurd. (absurd, BNC)

k. My parents were the type of parents who always seemed faintly disappointed by whatever it was you did, as if you were constantly letting them down in small ways. (disappointed, BNC)

l. He had the impression of being enveloped in a faintly luminous mist, like some high-flying bird drifting through a summer cloud. (luminous, BNC)

m. In fact, to my eyes, the appearance of informality had been taken to a faintly ludicrous degree. (ludicrous, BNC)

n. As he had expected, Grigoriev's skin was tinted faintly golden, the result of prolonged use of Longivex. (golden, BNC)

o. With a faintly malicious grin she nodded towards the dining-room. (malicious, BNC)

p. She glanced up at him, faintly puzzled by the question. (puzzled, BNC)

q. For all his talent, his faintly sinister appearance ruled him out. (sinister, BNC)

r. Instead, she felt faintly annoyed at the boldness of his questions and decided to turn the tables. (annoyed, BNC)

s. The British still tend to treat him with a faintly hostile embarrassment. (hostile, BNC)

t. The silvered glass was faintly green in places and speckled black where the silver had flaked off the back. (green, BNC)

In contrast, in COCA, we found the following adjective collocates with *faintly*. The data below the table are examples from COCA):

Adjective	Frequency	Adjective	Frequency
1. visible (sense)	42	11. green (sense)	10
2. ridiculous (emotion)	26	12. surprised (emotion)	10
3. glowing (sense)	18	13. familiar (sense, memory)	9
4. pink (sense)	17	14. luminous (sense)	9
5. sweet (sense)	17	15. bitter (sense)	7
6. aware (sense, recognition)	14	16. disapproving (emotion)	7
7. audible (sense)	12	17. discernible (sense)	7
8. embarrased (emotion)	12	18. embarrassing (emotion)	6
9. amused (emotion)	11	19. mocking (emotion)	6
10. blue (sense)	11	20. red (sense)	6

Table 2. COCA, Top 20 adjective collocates of *faintly* (among 100) (December 10, 2020)

(49) a. Wildfires and perhaps some intentionally set agricultural fires burn on the continent of Australia, with smoke plumes faintly visible in the night sky. (visible, COCA)

b. From that viewpoint his early postings look, at the least, faintly ridiculous. (ridiculous, COCA)

c. He looks for a moment at the faintly glowing ticket, puts it back in his pocket. (glowing, COCA)

d. His ears turned faintly pink. (pink, COCA)

e. He chewed slowly on the piece of hay; it tasted earthy and faintly sweet. (sweet, COCA)

f. She was only faintly aware of the four armed men who galloped into camp and dismounted. (aware, COCA)

g. The voices were only faintly audible, the words indistinct, and what they mostly heard was Tiger Man's deep, throaty voice. (audible, COCA)

h. Emma found herself faintly embarrassed by the life-sized marble lions that flanked the entrance. (embarrassed, COCA)

i. He looks faintly amused, a little apologetic. (amused, COCA)

j. Her eyes were pale green, the lids faintly blue. (blue, COCA)

k. His tufts of blond hair were tinged faintly green from chlorine. (green, COCA)

l. DeRicci felt faintly surprised at that. (surprised, COCA)

m. His voice sounds faintly familiar. (familiar, COCA)

n. A narrow trail, looking like a faintly luminous snake in the twilight, could be made out meandering down the hillside from the far end of the house. (luminous, COCA)

o. The garnet-red liquid, both sweet and faintly bitter, seemed far preferable to sweet soft drinks. (bitter, COCA)

p. "Do Kevin and Kelly know they're twins?'' Katherine asked, a faintly disapproving look coming over her face. (disapproving, COCA)

q. If one accepted faintly discernible and extended reading times, all brands responded at 100 mIU/mL. (discernible, COCA)

r. Sandwiches were faintly embarrassing because I would have to go out and eat them in the car park because you couldn't eat in the library, and I would have to leave. (embarrassing, COCA)

s. His voice became faintly mocking. (mocking, COCA)

t. His eyes glow faintly red. (red, COCA)

The following appears from the results above: First, there is a difference between the BNC and the COCA in terms of the most frequent pattern. The most frequent pattern in BNC is "faintly ridiculous'', which is emotive measurement. In contrast, the most frequent pattern in COCA is "faintly visible,'' which is a sense-based measurement, and the frequency of "faintly visible'' is much higher than the other patterns. Second, in terms of the proportion of emotive and sense-based measurements, in BNC 14 of the top 20 adjective collocates are based on an emotive adjective, whereas in COCA, 7 out of 20 adjective collocates are based on an emotive adjective. These results suggest that the use of *faintly* with an emotive predicate is more often used in British English than in American English. However, we should also acknowledge the fact that *faintly* can be used in both British and American English for both emotive and sensory measurements, which does not hold for Japanese *kasukani* and *honokani*.

The question is how we can analyze the meaning of *faintly*. In this paper, I tentatively consider the meaning of *faintly* as follows:

(50)　　[[faintly]]=$\lambda G_{\langle d,\langle e,t\rangle\rangle}\lambda x.\ \exists d[d \gtrapprox STND_{MIN}\wedge G(d)(x)]\blacklozenge$ *j* measures degree based on *j*'s sense of {vision (color) /smell/taste/hearing/touch/memory} or *j* measures the degree of emotion through experience.

Emotion and sense both have do with a speaker's experience, and it seems that it is not a coincidence that *faintly* can measure degrees of emotion and sense.

5. Conclusion. In this paper, I argue that the Japanese minimizers *kasukani*, *honokani*, and English *faintly* are sense-based minimizers in that they not only semantically denote a small degree but also conventionally implicate that the judge (typically the speaker) measures degree based on his/her own sense. I also showed that there are variations among the sense-based minimizers with regard to (i) the kind of sense, (ii) the presence/absence of evaluativity, and (iii) the possibility of the combination with an emotive predicate, and suggested that these variations can be analyzed based on the differences in CI (non-at-issue) components.

A theoretical implication of this paper is that there can be two types of minimizers in natural language: a "neutral minimizer'' that does not lexically specify the source of measurement, and a "sense-based minimizer'' that lexically specifies the source of measurement (i.e., specifies that the measurement is made based on a judge's own sense). This point is theoretically important because it suggests that there is a similarity between the neutral vs. sense-based minimizer distinction in the modifier domain and the distinction between regular gradable predicates (e.g., *tall*) and predicates of personal tastes (e.g., *tasty*) in the adjectival domain.

In a future study, more theoretical investigations should be carried out for the semantics/functions of sense-based minimizers. In this paper, I showed that each sense-based minimizer shows different selectional restrictions for gradable predicates in relation to the kind of sense that each minimizer can assume. It may be possible to consider sense-based minimizers as a type of classifier (i.e., they classify a scale based on a judge's sense/feeling).

Furthermore, more in-depth empirical and theoretical investigations are warranted to better understand the meaning and use of English *faintly*. In this paper, I showed that *faintly* can not only measure the degree of sense-related adjectives (e.g., *faintly visible*), but also measure the degree of emotion (e.g., *faintly ridiculous*). Interestingly, there were many examples in Corpus in which an emotive predicate and a sense-related verb co-occur ("his faintly sinister appearance'' (BNC), "everyone looked faintly surprised'' (BNC) or "his voice sounds faintly familiar'' (COCA)(see the examples in the above lists). These data suggest that there is a semantic interaction between sense and emotion.

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