



Title	On Metaphorical Meanings of Sensory Adjectives : How Are They Classified?
Author(s)	Iwahashi, Kazuki
Citation	OUPEL(Osaka University Papers in English Linguistics). 2010, 14, p. 1-21
Version Type	VoR
URL	https://doi.org/10.18910/58059
rights	
Note	

The University of Osaka Institutional Knowledge Archive : OUKA

<https://ir.library.osaka-u.ac.jp/>

The University of Osaka

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES: HOW ARE THEY CLASSIFIED?*

1 INTRODUCTION

The aim of this paper is to discuss two types of metaphorical meanings of sensory adjectives. In their uses, a property is understood in terms of another which belongs to different domains (cf. Lakoff and Johnson (1980)) as in (1):

- (1) a. Sally is *cold*.
b. (The writer always applies for jobs following a standard procedure.)
On the doormat, there were a few late Christmas cards plus the inevitable letter from the bank, but no offers of job interviews. As I had never actually made a *cold application* for a job before, I didn't really know what to make of this. [BNC]

As (1a, b) show, metaphorical uses of sensory adjectives convey a lexical meaning and a pragmatic meaning. In (1a), the metaphorical meaning of *cold* is conventional, and the lack of affection is interpreted as its lexical meaning. In (1b), the metaphorical meaning of *cold* is less conventional, and the lack of the standard procedure is grasped as a pragmatic meaning. If we look at these examples, we might wonder how metaphorical meanings of sensory adjectives are classified into these two types. This paper is an attempt to clarify the distinction between these two types of meanings.

2 PREVIOUS ANALYSES

In section 2, we will consider several previous analyses on how metaphorical

* This paper is an extended version of Iwahashi (2009). A part of the paper was presented at the 33rd Annual Meeting of Kansai Linguistic Society. I would like to express my gratitude to Yukio Oba and Sadayuki Okada for useful comments and encouragement. I also thank Seisaku Kawakami, Masaaki Tatsuki, and Kensei Sugayama for their helpful suggestions and comments. The responsibility of any remaining deficiencies rests entirely upon the author.

meanings are derived. Especially, we will see how these analyses are related to the understanding of conventional meanings and creative meanings of metaphorical expressions.

2.1 Chomsky 1965

According to Chomsky (1965), the violation of selectional restriction is involved in the meaning of metaphorical expressions as in (2):

- (2) Colorless green ideas sleep furiously. (Chomsky 1965: 149)
 (3) cold light, cold sound, cold heart

Such an expression is comprehended by direct analogy to well-formed sentences that observe the selectional rules, and this analogy is carried out if a specific context is provided (*ibid.*). However, as (1a) shows, an expression conveys a metaphorical meaning even if these rules are observed. Therefore, it is not always the case that such an analogy leads to the interpretation of metaphorical meanings. Moreover, as (3) shows, the meaning of some metaphorical expressions are figured out even if their interpretation is not highly context-dependent.

2.2 Steinmann (1973) and Grice (1975)

According to Steinmann (1973) and Grice (1975), metaphorical expressions are used in order to communicate implicatures intended by a speaker:

- (4) You are the cream in my coffee. (Grice 1975: 53)

In (4), the following implicatures will be derived depending on contexts. If the speaker thinks that cream is indispensable to coffee, 'You are my pride and joy' will be its implicature. If the speaker thinks that cream is unnecessary, 'You are my bane' will be its implicature. However, as (3) and (5) indicate, some metaphorical expressions are used even though the grasping of special implicatures is not intended. Since the reader does not need to grasp a particular implicature, the description of the sound is possible without the metaphorical use of the adjective *sharp*:

- (5) When an unpleasant {sharp/strong} sound was used as the 'punishment,' the second group, who had the more difficult discrimination to make, learned much less efficiently and became anxious and disorganized.
 [BNC]

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

As this example shows, a conventional meaning of a metaphorical expression can be seen in contexts where objective statement is involved. Furthermore, as in (3), some metaphorical meanings are understood without concrete contexts. For these reasons, metaphorical meanings can sometimes be grasped without deriving implicatures.

2.3 Nagy (1974)

Nagy (1974) deals with the metaphorical uses of predicates combined with various nouns. By investigating their possible combinations, it is indicated that their uses follow set patterns:

- | | | | |
|-----|----|------------------------------|------------------|
| (6) | a. | high price, high wages | (Nagy 1974: 216) |
| | b. | high spirits, high morale | (ibid.: 217) |
| | c. | high status, high reputation | (ibid.) |
| | d. | high wind, high gale | (ibid.) |
| | e. | high primates, high plants | (ibid.) |

As these examples show, adjectives are used metaphorically to describe amount, our spiritual condition, the evaluation of things, the intensity of some event, and the degree of the development of animals and plants. These classifications are discovered by looking at various types of combinations of nouns and predicates.¹ If we have a look at these patterns, we can find a general tendency in their combinations. However, exceptional combinations are outside the scope of this study. Therefore, we cannot predict what is understood from the exceptional combination in (1b).

2.4 Abraham (1975) and Morgan (1993)

Abraham (1975) and Morgan (1993) deal with the way of interpreting metaphorical meanings in creative expressions and conventional expressions. According to these analyses, when metaphorical meanings are established, they are interpreted directly without recourse to their literal meanings. If metaphorical meanings are not established, they are interpreted by considering their literal meaning:

- | | | | |
|-----|----|---------------------|--------------------|
| (7) | a. | That one is a pig. | |
| | b. | John is a kangaroo. | (Morgan 1993: 129) |

¹ These patterns are found by investigating the use of various predicates describing height. While amount and emotion are depicted by various predicates, evaluation, intensity and evolution are described by less varied predicates. When amount and emotion are described, predicates such as *boost*, *plummet*, *sink* and *soar* are used. When it comes to the description of evaluation, intensity and evolution, these predicates cannot be used. As for more minute behavior of various predicates, see Nagy (1974: 216-220).

In (7a), an established metaphorical meaning is involved. That is why the hearer can understand its meaning without evoking the characteristics of a pig. In (7b), on the other hand, the hearer has to rely on the information on its literal meaning. Therefore, the hearer has to think of what a kangaroo is like. As a consequence, the hearer can understand various metaphorical meanings. If we adopt this view, the metaphorical meaning is interpreted directly in (1a), for it is established. In (1b), on the other hand, its metaphorical meaning is understood indirectly on the basis of the information on temperature. However, it is unclear what sorts of metaphorical meanings are comprehended directly. It is also unclear what types of meanings are understood indirectly in these expressions. When we tackle this problem, the frequency in various contexts may provide us with the clue to distinguish these two types of meanings. Such an approach is useful, but their frequency alone does not give us definite cue for distinguishing them. For this reason, we cannot show clearly how frequently conventional meanings are seen in various contexts.

2.5 *Sperber and Wilson (1986/95)*

Now we will see how Sperber and Wilson (1986/95) give an account on the interpretation of metaphorical expressions. In their analysis, their interpretation involves deductive reasoning. As for conventional expressions, their interpretation is achieved by finding a strong implicature, which is derived from more limited and accessible encyclopedic entries as in (8a). When we interpret creative expressions, on the other hand, we utilize more varied encyclopedic entries to grasp weak implicatures as in (8b). For these reasons, the interpretation of (8a) is carried out based on the stereotypical information on a pigsty, i.e. a pigsty is filthy and untidy. That is how the filthiness and the untidiness of a room are understood. When we interpret (8b), we rely on various pieces of information on a bulldozer. For example, since a bulldozer is a machine, it is inflexible. Therefore, Robert's obstinateness is understood. In this case, since the information conducive to the interpretation is not determined, it is indeterminate what implicatures are grasped:

- (8) a This room is a pigsty.
 b. Robert is a bulldozer. (Sperber and Wilson 1986/1995: 236)

When we follow this claim, the interpretation of (1a) also requires deduction, and it will increase the hearer's processing effort. This increase of processing effort is counter to our intuition, for we can easily interpret the meaning of *cold* even without a concrete context. To avoid this problem, we have to assume that this word has some lexical meanings originally and that disambiguation determines its meaning. However, it is unclear what meanings are disambiguated. It is also unclear what meanings are deducted.

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

2.6 Traugott (1985)

Traugott (1985) explains how metaphorical an expression is. In this analysis, the involvement of extension, the degree of conceptualization, and the closeness of the relationship between two elements determine how metaphorical an expression is:

- (9) a. Mary is a *block of ice*.
 b. Mary left *before* Jane. (Traugott 1985: 22)
- (10) a. She is a *worm*.
 b. She is a *crumpled sheet of a print-out*. (ibid.: 23)

In (9a, b), while *a block of ice* denotes an object, *before* is non-referential in the description of temporal relationship. That is why (9a) is more metaphorical. As for (10a, b), while a person is compared to an animate entity in (10a), a person is compared to an inanimate object in (10b). Therefore, the degree of similarity between two things is larger in (10a). As the degree of their similarity is larger, the degree of conceptualization is smaller, and these two things have close relationship. For these reasons, (10b) is regarded as a more metaphorical expression. When we follow this idea, the extension of a word is not involved in the metaphorical expression in (1a, b), for they employ an adjective. Moreover, when we compare (1a) and (1b), the degree of the creativity cannot be predicted in relation to the degree of conceptualization, for the creative expression in (1b) describes the physical act of the job applicant. Since the description of such an act is involved, less conceptualization is involved in (1b), but this expression is actually more creative. Therefore, it is unclear how we should distinguish these two sorts of metaphorical meanings in relation to these three factors given by Traugott.

In response to various questions seen in this section, we will analyze metaphorical uses of sensory adjectives on the basis of Relevance Theory. In this way, the conventionality of metaphorical expressions can be explained by focusing on how the process of disambiguation is involved. In addition, the creativity of these expressions can be analyzed by taking into consideration how various metaphorical interpretations are deducted. By looking at various metaphorical uses of sensory adjectives, it will be indicated that a conventional metaphorical use of adjective like (1a) is interpreted via disambiguation. In these kinds of expressions, the meanings of sensory adjectives are extended in a set pattern. In addition, more general information is conveyed through these kinds of expressions. In a creative metaphorical use of adjective like (1b), more concrete information is transmitted. Moreover, their meanings are inferred depending on various specific contexts. For these reasons, their metaphorical meanings are deducted. Taking into consideration these characteristics of sensory adjectives in metaphorical expressions, we will see what kinds of meanings are disambiguated, and we will also see what types of meanings are deducted. Adopting such an approach, we will classify lexical meanings and pragmatic meanings in metaphorical uses of sensory adjectives.

3 THEORETICAL PREMISE: RELEVANCE THEORY

In this paper, we assume that the creativity of metaphorical expressions affects the way of their interpretation and processing effort needed to interpret them. To interpret the meanings of creative expressions, the reader has to judge what way of inference leads to the comprehension of the intended meaning in relation to a particular context. We can grasp such an aspect by investigating how disambiguation and deduction serve to their interpretation. Therefore, we will analyze various metaphorical uses of sensory adjectives from the point of view of Relevance Theory. Before analyzing them, we will see its outline. Especially, we will see how disambiguation and deduction are carried out.

According to Relevance Theory, a hearer follows a path of least effort to interpret utterances. Along such a path, the meaning of semantically ambiguous expressions like *bank* is disambiguated. The referent of pronouns and other deictic expressions are also resolved. Moreover, he (=the hearer) infers what information is omitted in an utterance. Through these steps, he understands what is explicitly communicated. He also infers what is implicated in an utterance (Wilson (2002: 4)). Namely, he derives explicatures and implicatures in this way.

When we derive implicatures, we draw an inference by utilizing an explicature and various contextual assumptions as premises. We will have a look at (11) and see how implicatures are derived:

(11) Caroline is our princess.

(Carston 2002: 347)

Suppose he knows that Caroline is the princess of Monaco, (11) conveys a truism. However, if he does not know how Caroline was brought up, he carries out a deductive reasoning in the following way. In such a case, he uses the explicit content of this utterance as a premise. He also makes use of an assumption on how a princess is raised as another premise. From these premises, it is understood that Caroline is an indulged and spoiled person. In this case, the information on a princess and a derived conclusion are looked upon as implicatures.

Besides grasping implicatures, an ad hoc concept is constructed in interpreting (11). When an ad hoc concept is constructed, a concept denoted by a word is broadened or narrowed (ibid.: 321-334). Take the word *princess* for example, it literally denotes a female member of a royal family, but the literal concept PRINCESS is loosened in relation to the implicature given above. That is how a loosened concept PRINCESS* is constructed, and this concept includes indulged and spoiled women who do not belong to a royal family. As such a process shows, an implicature is derived from the content of an explicature. Moreover, an ad hoc concept is constructed in relation to the content of an implicature, and the explicit content of an utterance is adjusted. Such a process of utterance interpretation is called mutual adjustment.

Furthermore, when a metaphorical meaning is conventionalized, it is understood via disambiguation (Wilson and Carston (2007: 241)):

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

(12) No teenager is a *saint*.

(Wilson and Carston 2007: 240)

For such a reason, a lexical meaning changes after the repetition of a deductive reasoning. Consequently, some metaphorical meanings of a word are looked upon as their lexical meanings. Take *saint* for instance, this word has several lexical meanings, because it has been used metaphorically for a long time and deduction has been repeated. That is why the word also denotes a virtuous person.

4 THE ANALYSIS OF THE METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

In this section, we will consider the frequency of conventional metaphorical expressions and creative metaphorical expressions in 4.1. Then, we will see what types of meanings are disambiguated in metaphorical uses of sensory adjectives in 4.2. After that, we will see how deduction leads to the understanding of their creative metaphorical meanings in 4.3. Subsequently, we will also see what factors lead to the creativity of metaphorical expressions in 4.4. Now, we will begin with 4.1.

4.1 The Frequency of Sensory Adjectives in Metaphorical Expressions

As for the distinction between the creative metaphorical uses of sensory adjectives and their conventional metaphorical uses, the demarcation is possible by investigating their frequency in British National Corpus. As (13) shows, conventional expressions are used more frequently in contrast to the creative expressions given in (14):

- (13) cold light (50), soft light (43), heavy heart (39), warm welcome (180), sharp increase (62), clear majority (78), low quality (41), bitter experience (38), upright man (11)
- (14) cold application (1), sharp authority (1), getting warm (the description of finding an almost correct answer) (5)

As (13) shows, when sensory adjectives convey various lexical meanings, these adjectives occur more frequently. On the other hand, as (14) shows, when these adjectives transmit pragmatic meanings, these adjectives are used less frequently. Therefore, the metaphorical meanings are understood in relation to each context.²

² In (13), the use of sensory adjective is limited in the description of the evaluation concerning morality. This is reflected in the fact that people judge such an aspect of someone less frequently. People always perceive something and have various emotions. People also evaluate various things and think about the degree of various activities and events. On the other hand, the evaluation on morality is achieved in relation to society. That is why people assess the moral aspect of others less frequently. For these reasons, the description of moral evaluation is limited in comparison to other conventional metaphorical uses of sensory

In addition, compared with the expressions in (14), the expressions seen in (13) apply to more varied things and situation as in (15) and (16):

- (15) a. *Cold light* of the fluorescent tube. [BNC]
 b. The clouds passed from the face of the moon, which now threw a clear *cold light* on the two adjoining yards. [BNC]
 (16) a. There has been a particularly *sharp increase* in long-distance commuting. [BNC]
 b. But it is firmly against heavy-handed regulation, such as a *sharp increase* in mandatory fuel efficiency for cars. [BNC]

In (15), *cold light* serves as the description of a fluorescent tube and the moonlight. In (16), *sharp increase* is used in the description of the increase of people and the fuel efficiency. Compared with these expressions, the expressions in (14) are used to describe more limited situations. These facts indicate that the uses of conventional expressions are seen more widely. They also demonstrate that their uses depend on contexts to a lesser extent.

4.2 Metaphorical Meanings Grasped via Disambiguation

In 4.1, we have seen the frequency of various metaphorical uses of sensory adjectives. In this section, we will elucidate what meanings are disambiguated by taking into consideration the pattern of meaning changes in the metaphorical uses of sensory adjectives. Then, we will see how the findings in 4.1 are related to the observations given below.

4.2.1 The Description of Emotion and Sensation When sensory adjectives are used to describe sensation, their meanings change in a set pattern. As Ullmann (1951) and Williams (1976) point out, their semantic change occurs in the following pattern: [Touch] → [Taste] → [Smell] → [Vision] → [Sound]. Accordingly, the metaphorical meanings in (17) follow this pattern:

- (17) a. sharp taste, sharp smell, sharp colour, sharp sound [BNC]
 b. sweet smell, sweet sight, sweet voice [BNC]
 c. bright sound [BNC]

As these examples show, their metaphorical uses tend to describe other senses. In these cases, general information on our perception is conveyed (Ullmann (1951), Williams (1976), Seto (ed.) (2007)).³

adjectives.

³ As Sadamitsu (2002, 2004) points out, adjectives describing smell are rarely used to describe other

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

In addition, these adjectives are also used to describe emotion and its transmission. If these adjectives are used for these purposes, adjectives originally related to touch, taste, and vision are used. Therefore, their meanings also change in a set pattern (Kusumi (1988), Yamada (1994)):

- | | | | |
|------|----|---|-------|
| (18) | a. | heavy heart, warm heart | [BNC] |
| | b. | bitter mood, sour mood, sweet heart | [BNC] |
| | c. | black mood, dark mood | [BNC] |
| (19) | a. | warm reception, warm message, warm response | [BNC] |
| | b. | sour remarks, bitter words | [BNC] |
| | c. | bright conversation, bright greetings | [BNC] |

In these types of expressions, various nouns are used with sensory adjectives, and their metaphorical meanings do not vary in various combinations of nouns and adjectives in (20)-(22):

- | | | |
|------|---|-------|
| (20) | heavy sound, heavy silence, heavy feeling | [BNC] |
| (21) | cold grey, cold light, cold heart | [BNC] |
| (22) | warm congratulations, warm tribute | [BNC] |

In (20)-(22), for example, oppressiveness is retained in sound, silence and mood. In addition, chill is retained in grey color, light and emotion. Besides, heart-felt, humane communication is involved in congratulation and paying tribute.

Furthermore, the metaphorical meanings of these kinds of expressions are grasped without specific contexts as in (23):

- | | | |
|------|--|-------|
| (23) | cold light, cold sound, cold heart, cold welcome | [BNC] |
|------|--|-------|

Moreover, if the patterns seen in (17)-(19) are retained in metaphorical meanings, the communication of special implicatures is not intended. Therefore, these expressions are used in direct and objective statements of facts as in (24). These texts focus on the content stated in the explicatures and the general characteristics. Especially, an intense stimuli and a negative emotion are conveyed. In these expressions, the metaphorical meanings of sensory adjectives are derived without specific contexts conveying a writer's opinion, attitude and impression:

- | | | |
|------|----|---|
| (24) | a. | When an unpleasant {sharp/loud} sound was used as the 'punishment,' the second group, who had the more difficult discrimination to make, learned much less efficiently and became |
|------|----|---|

senses. For this reason, the meaning of adjectives like *fragrant* do not change. Therefore, *fragrant portrait* is not interpreted metaphorically. Instead, this expression is understood as the description of a portrait on which perfume is sprayed.

- anxious and disorganized. [BNC]
- b. The incidents occurred ahead of demonstrations planned to take place in Yerevan to mark the anniversary on May 28 of the proclamation of Armenia's brief independence in 1918-21, and tensions were already high in Yerevan. The killings produced a {somber/depressed} mood at an anniversary rally in which at least 100,000 people took part. [BNC]
- c. The Archbishop of Liverpool, Derek Worlock, sent {a warm/an affectionate} letter of congratulation to Cllr Cooper, saying her honour was 'very well deserved.' [BNC]

As these examples show, sensory adjectives depict other sensations, emotion and its communication. In these cases, non-metaphorical use of adjectives is also possible. Such a use also conveys the same information. Thus, the metaphorical meanings are understood without deriving particular implicatures. For these reasons, these kinds of meanings are interpreted via disambiguation. Accordingly, these metaphorical meanings are regarded as their lexical meanings. Furthermore, in such a case, various metaphorical meanings of a sensory adjective share the same kind of information even if different sensations are described. For this reason, these words are polysemous.

4.2.2. The Evaluation of Quality When sensory adjectives are used to describe the evaluation of quality, their meanings also change in a set pattern. Therefore, adjectives originally describing touch, taste, and vision are used in the description of evaluation. Especially, adjectives describing pleasant sensations are employed for describing positive evaluation, and those describing unpleasant sensations serve to communicate negative evaluation. In addition, those describing brightness and straightness also convey positive evaluation metaphorically: ⁴

- (25) a. harsh years, rough life, dull days [BNC]
 b. bitter situation, sour experience, sweet home, sweet nothings [BNC]
 c. crooked deal, gloomy news, upright man, bright future [BNC]

As these examples show, these expressions are used in the evaluation of affairs, quality, and situation. In these cases, general information on our estimation is conveyed.

In these types of expressions, various nouns are used with a sensory adjective, and its metaphorical meaning does not vary in various combinations of nouns and an adjective in (26):

- (26) bitter situation, bitter world, bitter experiences [BNC]

⁴ Especially, the uses of *sweet* and *bitter* have this tendency significantly. See Oda (2003), and Yamazoe (2003).

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

In (26), for example, unpleasantness is retained in situation, world, and experiences.

Furthermore, the metaphorical meanings of these kinds of expressions are grasped without specific contexts as in (27):

- (27) harsh years, low quality, crooked deal [BNC]

In addition, if such a pattern is retained in metaphorical meanings, the communication of implicatures is not intended. Therefore, these expressions are used in an objective statement as in (28). This passage neither conveys the writer's attitude nor impression. Instead, the general description of fact and evaluation is intended, and the assessment is described directly. That is why the mere description of the low quality of the roof is achieved. In this expression, the metaphorical meaning of a sensory adjective is derived without specific contexts where more minute information is conveyed:

- (28) In the past, the fall from grace of the flat roof was due to series of problems: inappropriate combinations of waterproofing material, insulation and decking; low durability waterproofing materials; poor design and detailing; and {low/bad} quality installation. [BNC]

In (28), the causes of the breakage of the roof are stated. One of the reasons is its improper installation. As this example shows, *low* can be replaced with *bad*. However, the same information is grasped from this non-metaphorical expression. Thus, the metaphorical meanings are understood without deriving particular implicatures. Instead, the explicit content is the writer's intended meaning. Examples (25)-(27) also indicate that the evaluation of a property through the metaphorical use of sensory adjectives is conventionalized. Considering these facts, the metaphorical meanings on evaluation are disambiguated. Accordingly, the metaphorical meaning is lexicalized.

4.2.3 The Description of Degree Sensory adjectives are also used in describing degree as (29) shows. In such a case, adjectives on touch, taste, and vision tend to describe the degree of natural phenomena, activity, and comparison. Especially, adjectives describing strong tactile stimuli, pungent taste, and the conspicuity of the appearance tend to convey the intensity of these affairs. On the other hand, adjectives that are originally used for weak tactile stimuli and the apparent lack of prominence describe the lack of their intensity:

- (29) a. heavy wind, light wind, light drowse, sharp contrast [BNC]
 b. bitter industrial confrontation, bitter wind [BNC]
 c. thin scope, vague recollection, vivid contrast, clear recollection [BNC]

In this type of expression, various nouns are used with an adjective, and its

metaphorical meaning does not vary in various combinations of nouns and an adjective in (30):

- (30) heavy wind, heavy damage, heavy burden [BNC]

When we look at these examples, intensity is stated in all of the expressions, and the same meaning of the word *heavy* is shared in these phrases.

Furthermore, the metaphorical meanings of these kinds of expressions are grasped without specific contexts. Therefore, the combinations of nouns and adjectives in (31) sound natural even without particular contexts:

- (31) dim memory, vague recollection, vivid contrast [BNC]

In addition, if metaphorical meanings have such a pattern, it is not intended by a writer or a speaker to convey implicatures. It follows that the general description of degree is seen in a direct and objective statement of fact as in (32). In such an expression, a metaphorical meaning of a sensory adjective is derived without specific contexts where a writer's attitude and impression are involved:

- (32) It was agreed that arch's first project should be the provision of mobile conservation units to tour regions where war has inflicted {heavy/intense} damage on the cultural heritage, primarily Croatia. [BNC]

The passage is an excerpt from an article in a newspaper. It is objectively stated that a war destroyed a cultural heritage. Since the degree of destruction is high, the word *heavy* is used. Such information is conveyed even if *heavy* is replaced with *intense*. That is why this information is not interpreted as a particular implicature conveyed by the metaphorical word. As we have seen in (29)-(31), the metaphorical meanings on degree are not highly context-dependent. In addition, as (32) shows, the mere description of intensity is achieved. For these reasons, these meanings are interpreted via disambiguation, and they are understood as the lexical meanings of sensory adjectives.

4.2.4 The Description of Amount Quantity is also depicted by various metaphorical uses of sensory adjectives. Especially, adjectives describing strong tactile stimuli and outstanding appearance of objects tend to convey amount metaphorically:

- (33) a. sharp increase, sharp decline, heavy losses, heavy fines [BNC]
b. high wage, high unemployment, clear majority [BNC]

In these uses of sensory adjectives, various nouns occur with an adjective, and its

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

metaphorical meaning does not vary in various expressions as in (34):

- (34) thick hair, thick mass, thick bush [BNC]

In these examples, large amount of hair, mass and plants are stated, and all the uses of *thick* retain the meaning of large quantity.

This type of metaphorical meaning is also understood even without concrete contexts. That is why the combinations of nouns and adjectives in (35) all sound natural without specific contexts:

- (35) heavy expenditure, high wages, thick hair [BNC]

In this type of expression, the transmission of the information in the explicatures is mainly intended. Therefore, the objective description of amount is seen in (36):

- (36) a. For all that, observers are unanimous that Swapo will emerge with a {clear/substantial} majority. [BNC]
 b. This would involve the governments in {heavy/much} expenditure but the commissioner said past neglect had reduced railways to a 'Cinderella existence.' [BNC]

(36a) is an excerpt from a new article. As the number of people is large, *clear* is used to state this. As for (36b), it is also extracted from a news article. Since much money is spent, *heavy* is employed to depict this. If we see these examples, these meanings are transmitted by the non-metaphorical uses of adjectives like *substantial* and *much*. That is why their interpretation does not entail the understanding of particular implicatures. Therefore, lexical meanings are grasped by the hearer or reader, and these meanings are disambiguated.

4.2.5 The Description of Difficulty There are other metaphorical meanings of sensory adjectives. Now, we will see their metaphorical use in describing difficulty. In such a case, adjectives that originally convey strong tactile or gustatory stimuli are used metaphorically. On the other hand, adjectives that originally describe weak tactile stimuli are used to convey the ease of activities:

- (37) stiff competition, smooth functioning, smooth production, harsh decision, rough conditions, bitter business, heavy job, tough decision [BNC]

In these uses too, various nouns are modified by an adjective, and its metaphorical meaning does not vary in various expressions, as in (38):

- (38) smooth action, smooth delivery, smooth victory [BNC]

When we touch a smooth object, we do not feel any obstacles on its surface. In the similar vein, when we are engaged in the activities stated in (38), we feel no obstacles, and we find these tasks easy. As these examples indicate, the same metaphorical meaning is involved in these three expressions.

When sensory adjectives serve to transmit difficulty, their metaphorical meanings can be figured out without particular contexts:

- (39) stiff competition, harsh decision, bitter business [BNC]

This type of expression is also employed even if other information than difficulty is not implicated. Accordingly, as (40) shows, the mere ease or difficulty of activities is depicted:

- (40) By the end of February, he was on a second hours' exercise, and Sister Coony, who had watched his restless pacing and had seen that he was bored, found him some {light/easy} work to do. [BNC]

In this example, light work is a task in which substantial effort is not required. If this information is grasped, the interpretation of other special implicatures is not necessary. Since the interpretation of these implicatures is not essential, the use of *easy* sounds natural and it conveys the same meaning as *light*. As the metaphorical expressions in (37)-(39) show, the meanings on easiness or difficulty are not interpreted in relation to a specific context. Therefore, these meanings are regarded as their own lexical meanings which are understood via disambiguation.

Moreover, these meanings we have seen thus far are also conveyed by various non-metaphorical uses of adjectives. As (41) shows, adjectives originally describe sensation, emotion, evaluation, amount, degree and difficulty (Dixon (1991, 2004), Tucker (1998)):

- (41) a. hot, cold, dark, heavy, dry, sweet, sour, bitter (Tucker 1998: 142)
 b. happy, unhappy, sad, pleased, displeased, annoy, angry (ibid.: 137)
 c. good, bad, excellent, poor, beautiful, fantastic (ibid.: 130)
 d. all, whole, many, some, few, only, enough (Dixon 2004: 5)
 e. definite, probable, true (Dixon 1991: 78)
 f. easy, difficult, simple (Dixon 2004: 5)

For the reasons we have seen thus far, the metaphorical meanings of sensory adjectives in 4.2 are also conveyed by the primary uses of adjectives. These metaphorical meanings are not grasped in relation to a particular context. Therefore, these metaphorical meanings are regarded as the lexical meanings of sensory adjectives.

The metaphorical uses of sensory adjectives are seen when sensation, emotion, evaluation, quantity, degree and difficulty are described. These characteristics are found in various uses of sensory adjectives and their arguments. In addition, the metaphorical meanings in these cases are grasped without a specific context where the communication of particular implicatures is achieved. As the observation shows, these metaphorical meanings are the innate meanings of sensory adjectives, and these meanings are comprehended via disambiguation. Moreover, the original information on perception is retained even in these metaphorical uses. Therefore, these sensory adjectives are polysemous.

4.3 Metaphorical Meanings Grasped through Deduction

As we have seen in 4.1, disambiguation leads to the understanding of sensation, emotion, evaluation, degree, quantity and difficulty. In contrast, other metaphorical meanings given below are understood by deductive reasoning.

First, we will see how a detailed activity is understood through such a process in (42):

- (42) On the doormat, there were a few late Christmas cards plus the inevitable letter from the bank, but no offers of job interviews. As I had never actually made *a cold application for a job* before, I didn't really know what to make of this. (= (1b))
- (43) #cold application

In (42), *cold application* is the description of the way of applying for a job. To describe the lack of standard procedure, *cold* is used in the same way as in (43). However, the expression in (43) sounds unnatural without a particular context. Therefore, this metaphorical meaning is understood through deduction. When the metaphorical meaning is deducted, the reader uses the information stated in the explicature. Moreover, the reader derives the assumptions on low temperature stated in the explicature, and the reader employs them as premises. For example, a cold application is an activity in which a person is cold. Additionally, if a person is cold, he or she is not ready for an activity. In addition, if he or she is not ready for an activity, he or she does not follow a standard procedure. If the person does not follow such a step, the person applies for a job without a reference. On the basis of the explicature and these assumptions, the reader understands that the writer did not make an application for a job without an appropriate procedure, i.e. sending a recommendation. When such a way of application for a job is interpreted as an implicature, the explicature is also adjusted. Accordingly, the ad hoc concept COLD* comes to refer to the lack of the regular step for applying for a job.

Furthermore, when the reader has to infer what activity is carried out, he has to grasp it in a different way, too. In the next example, the role of the person stated in the argument is essential, and such a role is understandable from the context. In this case

too, the interpretation of metaphorical meaning is achieved in relation to a specific context, for the description of manner is unique to this context. Therefore, the metaphorical meaning of a sensory adjective is interpreted by deduction:

- (44) On other occasions Rita found, as she did with the children, that a *sharp authority* was more effective. Today she decided that ‘house clearances’ lettered on a junk shop window was intolerable. [BNC]
- (45) #sharp expert, #sharp authority (cf. His dedication to public service is well known. As a state senator his interest includes being a very *sharp expert* now in the subject of today’s program. [<http://new.stjohns.edu/media/3/b7ef97f7bec14642a58e06d0c9ec1c30.pdf>])

In (44), the role of an authority on spelling is described. The authority judges clearly whether a spelling is correct. To describe this, the word *sharp* is used. If this word is used to such an aspect of an authority, specific contexts are necessary because the mere combinations of words in (45) are unnatural. The use of these combinations requires specific contexts. That is why the interpretation of such a metaphorical meaning involves deduction. In deduction, the reader uses the information given in the explicature and the assumptions on sharpness as premises. For instance, if an expert on spelling is sharp, such a person is useful. This assumption is derived because we know that sharpness makes an object like a blade useful. Moreover, if an expert is useful, he or she functions very well. In addition, if he or she functions very well, such a person can judge the correctness of spelling clearly. On the basis of the explicature and the assumptions derived from sharpness, the reader derives an implicature through deductive reasoning. As a consequence, it is understood that an authority who can judge the correctness of spelling clearly is effective. When such an implicature is obtained, the reader adjusts the content of the explicature in correspondence to the implicature and the context. Therefore, the ad hoc concept SHARP* refers to the way of judging the correctness of spelling clearly.

Next, we will consider an example in which the reader has to grasp the manner of activity entirely depending on the context. In the next example, it is not clearly stated in what activity a person is engaged. In addition, since only the pronoun *you* is used with the adjective *warm*, the words used in the example do not provide clues as to what activity is carried out:

- (46) The cab driver who now displayed a big black muscular right arm about four feet long, curtained by torn Lycra and ribbons of human flesh. ‘Let’s give you another clue. Tell me when you think you are getting *warm*.’ Bill began to bulge in all directions. [BNC]
- (47) You are {right/#warm} to note that two of your photos were used in the last magazine. [BNC]

In (46), *warm* is used to convey that a person can almost recognize somebody correctly. Namely, it is stated that the person can almost make a correct judgment. To

describe this, only *hot* and *warm* are used. When this meaning is understood, the interpretation is dependent on a specific context. Otherwise, *warm* is interpreted as the state of human body with high temperature. Besides, as (47) shows, the use of *warm* is restricted. In (47) too, it is stated that somebody can judge correctly, but this adjective cannot be used appropriately. As such a fact indicates, the interpretation of (46) involves the derivation of a more specific implicature. For these reasons, the metaphorical meaning in (46) is interpreted by deduction. When the reader understands the metaphorical meaning of *warm*, he has access to the information stated in the explicature. Then, he also utilizes the information on warmth in relation to this context. Accordingly, the reader has access to the following assumptions: if a person is warm, he or she is engaged in an activity; if a person is engaged in an activity, he or she is likely to achieve his or her goal; if a person is likely to achieve such a goal, he or she almost recognizes correctly who the person is. By using the explicature and these pieces of information as premises, it is understood that the hearer comes to recognize almost correctly who the person is. Especially, it is understood that someone is in a situation in which he or she has to make this kind of judgment purposefully. If this conclusion is interpreted as an implicature, the content of the explicature is also adjusted. Therefore, the ad hoc concept WARM* is interpreted as the manner of almost recognizing somebody correctly. It follows that more concrete information is grasped in (46) than (47), for the use of *right* in (47) does not suggest the involvement of such a situation.

As these examples show, sensory adjectives are used to depict the detailed manner of action. In these cases, limited adjectives are used. Moreover, more concrete and minute information is transmitted. That is why the comprehension of the metaphorical meanings of these adjectives is achieved by using more contextual information. For these reasons, the metaphorical meanings in these uses of adjectives are grasped via deduction.⁵

4.4 The Factors Bringing about Creativity

Thus far, we have seen what meanings are seen in the creative metaphorical uses of sensory adjectives. Especially, we have analyzed these expressions in relation to contexts. Now, we will consider what semantic components are involved in their metaphorical uses. Moreover, we will also see the relationship between these adjectives and nouns. On the basis of such relationship, we will consider what factors lead to the creativity of their metaphorical uses.

First, if the metaphorical meanings of these adjectives are conventional, various general meanings are mainly related to the evaluative factor (Osgood et al. (1957:

⁵ As for other situations in which deduction is involved, see Sperber and Wilson (1986/95: 237) and see Iwahashi (2006). According to Sperber and Wilson, the metaphorical meaning in literary criticism is interpreted by deduction. According to Iwahashi (2006), the meanings of synaesthetic adjectives in the description of art works are also understood by deduction. As for the difference in meaning between these synaesthetic adjectives and other uses of sensory adjectives, see Iwahashi (2007). This study also focuses on the different situations where these adjectives are used.

36)):

- (48) a. cold light, cold sound, cold heart, cold welcome, soft flavour, soft scent, soft view, soft music, soft heart, soft words, heavy darkness, heavy sound, heavy heart, heavy word, sweet smell, sweet view, sweet music, sweet memory, sweet conversation, dark voice, dark mood, dark hyperboles [BNC]
 b. crooked deal, low quality, harsh years, bitter truth [BNC]

As these examples show, sensory adjectives are used in conventional metaphorical expressions in order to evaluate sensation, emotion, communication, other things and situations.

Furthermore, some conventional metaphorical meanings of sensory adjectives are related to potency and activity factor (Osgood et al. (1957: 36-38)). In (49a), potency, which is related to strong power, is related to the metaphorical meanings. In (49b), activity, which is related to strong stimuli, is related to the metaphorical meanings:

- (49) a. heavy wind, heavy rain shower, heavy expenditure, stiff competition, harsh decision, rough life, harsh years [BNC]
 b. sharp contrast, bitter industrial confrontation, sharp increase, bitter business [BNC]

When conventional metaphorical expressions employ sensory adjectives, strong power and stimuli are related to intensity, amount, and difficulty.

In creative metaphorical uses of sensory adjectives, the meanings are related to the manner of action:

- (50) On the doormat, there were a few late Christmas cards plus the inevitable letter from the bank, but no offers of job interviews. As I had never actually made a *cold application* for a job before, I didn't really know what to make of this. (=42))
 (51) On other occasions Rita found, as she did with the children, that a *sharp authority* was more effective. Today she decided that 'house clearances' lettered on a junk shop window was intolerable. (=44))

In (50), the metaphorical meaning of *cold* is related to negative evaluation. That is why the negative evaluation toward the application for a job is grasped. However, since the noun *application* denotes an action, the metaphorical meaning is also understood as the manner of action. In (51), on the other hand, the metaphorical meaning of *sharp* is originally related to evaluation and activity. That is why the positive evaluation toward the authority is grasped. It is also understood that the authority is actively engaged in the job for the same reason. Based on the pragmatic inference, it is more minutely understood how the authority carries out his or her task.

ON METAPHORICAL MEANINGS OF SENSORY ADJECTIVES

As a consequence, it is understood that such an authority makes a clear and accurate judgment on spelling.

In addition, in these creative uses of sensory adjectives, the way of combining adjectives and nouns is variable. The comparison between (50)-(52) indicates this:

- (52) cold light, soft music, sweet memory, sharp increase, sharp contrast, bitter experience, harsh years

In (50), the metaphorical use of the adjective describes the manner of applying for a job. That is why it is understood that the applicant had never made an application for a job without a reference. When we compare this example with (51), the argument and the context suggest activities, but they are evoked in a different way. Because of this characteristic, this type of metaphorical meaning does not tell us the manner of activities in a uniform way. For that reason, this metaphorical meaning is interpreted in relation to a specific context and respective argument. In (52), sensory adjectives are used in conventional metaphorical expressions. In these cases, things stated in the argument are evaluated by these sensory adjectives. Thus, the way of using the sensory adjectives does not vary in these expressions and the original uses of sensory adjectives. When these adjectives are used to indicate degree, they inform us of the degree of activities and events themselves stated in the arguments. Accordingly, the metaphorical meanings of sensory adjectives are connected with their arguments in a regular way. When we observe these ways of modification, we can see that there is no parallel way of modification between creative metaphorical expressions and the other uses of sensory adjectives.

As we have seen thus far, creative metaphorical uses of sensory adjectives give us more information depending on contexts. In these cases, the manner of action is conveyed besides evaluation and intensity. When sensory adjectives are used for such a purpose, they do not modify nouns uniformly. This characteristic leads to the creativity of the metaphorical uses of these adjectives.

5 CONCLUSION

In this paper, we have considered the metaphorical uses of sensory adjectives. These uses describe sensations, emotion, evaluation, degree, quantity and difficulty. In these uses, the metaphorical meanings are interpreted without contexts. In addition, the transmission of the information stated in the explication is mainly understood. Therefore, these metaphorical meanings are interpreted via disambiguation, and they are lexicalized. Moreover, other sensory adjectives are combined with nouns only a few times. In these cases, the metaphorical meanings are entirely context-dependent. These meanings are interpreted via deduction, and they are regarded in their pragmatic meanings.

REFERENCES

- Abraham, Werner (1975) *A Linguistic Approach to Metaphor*, Peter de Ridder Press, Lisse.
- Carston, Robyn (2002) *Thoughts and Utterances: The Pragmatics of Explicit Communication*, Blackwell, Oxford.
- Chomsky, Noam (1965) *Aspects of the Theory of Syntax*, MIT Press, Cambridge, MA.
- Dixon, Robert M. W. (1991) *A New Approach to English Grammar, on Semantic Principles*, Clarendon Press, Oxford.
- Dixon, Robert M. W. (2004) "Adjective Classes in Typological Perspective," in Robert M. W. Dixon and Alexandra Y. Aikhenvald (eds.), *Adjective Classes: A Cross-Linguistic Typology*, 1-49, Oxford University Press, Oxford.
- Grice, Paul (1975) "Logic and Conversation," in Peter Cole and Jerry L. Morgan (eds.), *Syntax and Semantics vol.3: Speech Acts*, 41-58, Academic Press, New York.
- Iwahashi, Kazuki (2006) "Kaiga no Tokucho wo Noberu Kyokankaku Hyogen to Sono Koka [Synaesthetic Adjectives Describing the Features of Pictures and Their Effects]," *Proceedings of the Eighth Annual Conference of the Pragmatics Society of Japan*, 9-16.
- Iwahashi, Kazuki (2007) "Shiten to Kyokankaku Hyogen [Perspectives and Synaesthetic Expressions]," in Seisaku Kawakami and Kazumi Taniguchi (eds.), *Kotoba to Shiten [Language and Perspective]*, 20-30, Eihosha, Tokyo.
- Iwahashi, Kazuki (2009) "Kankaku Keiyoshi no Goiteki Imi to Goyoronteki Imi no Kyokai wo Megutte [On the Boundary between the Lexical and the Pragmatic Meanings of Sensory Adjectives: In the Light of Disambiguation and Deduction]," *KLS* 29, 171-181.
- Kusumi, Takashi (1988) "Kyokankaku ni Motozuku Keiyohyogen no Rikai Katei nitsuite : Kankaku Keiyo Go no Tsuyoso-teki Shushoku [Comprehension of Synaesthetic Expressions: Cross-modal Modification of Sense Adjectives]," *The Japanese Journal of Psychology*, 373-380.
- Lakoff, George and Mark Johnson (1980) *Metaphors We Live By*, University of Chicago Press, Chicago.
- Morgan, Jerry L. (1993) "Observations on the Pragmatics of Metaphor," in Andrew Ortony (ed.), *Metaphor and Thought, Second Edition*, 124-136, Cambridge University Press, Cambridge and New York.
- Nagy, William Elmer (1974) *Figurative Patterns and Redundancy in the Lexicon*, University Microfilms, Ann Arbor.
- Oda, Nozomi (2003) "Amakute Sweet [Amai and Sweet]," in Ken-ichi Seto (ed.), *Kotoba wa Aji wo Koeru [Language Goes beyond Taste]*, 186-214, Kaimeisha, Tokyo.
- Osgood, Charles E., George J. Suci and Percy H. Tannenbaum (1957) *The Measurement of Meaning*, University of Illinois Press, Urbana.
- Sadamitsu, Miyagi (2002) "A Cognitive Account of Synaesthetic Metaphor," *OUPEL* 6, 115-130.
- Sadamitsu, Miyagi (2002) "Synaesthesia Re-examined: An Alternative Treatment of Smell Related Concepts," *OUPEL* 8, 109-125.

- Seto, Ken-ichi (ed.) (2007) *Eigo Tagi Network Jiten* [Dictionary of English Lexical Polysemy], Shogakukan, Tokyo.
- Sperber, Dan and Deirdre Wilson (1986/95) *Relevance: Communication and Cognition*, Blackwell, Oxford.
- Steinmann, Martin (1973) "Figurative Language and the Two-Code Hypothesis," in Ralph W. Fasold and Roger W. Shuy (eds.), *Analyzing Variation in Language*, 220-227, Georgetown University Press, Washington D.C.
- Traugott, Elizabeth Closs (1985) "'Conventional' and 'Dead' Metaphors Revisited," in Wolf Paprotté and René Dirven (eds.), *The Ubiquity of Metaphor in Language and Thought*, 17-56, John Benjamins, Amsterdam.
- Tucker, Gordon H. (1998) *The Lexicogrammar of Adjective: A Systemic Functional Approach to Lexis*, Cassell, London and New York.
- Ullmann, Stephen (1951) *The Principles of Semantics*, Basil Blackwell, Oxford.
- Williams, Joseph M. (1976) "Synaesthetic Adjectives: A Possible Law of Semantic Change," *Language* 52, 461-478.
- Wilson, Deirdre (2002) "Relevance Theory: From the Basics to the Cutting Edge," Text for ICU Open Lectures on Cognitive Pragmatics.
- Wilson, Deirdre and Robyn Carston (2007) "A Unitary Approach to Lexical Pragmatics: Relevance, Inference and Ad Hoc Concepts," in Noel Burton-Roberts (ed.), *Pragmatics*, 230-259, Palgrave, London.
- Yamada, Hitoko (1994) "More than Five II: Kyokankaku ga Ukibori ni Suru Kankaku (Eigo no Ba-ai) [More than Five II: Three More Senses in English Synaesthetic Metaphors]," *Journal of Language and Literature* 1, 113-134.
- Yamazoe, Shugo (2003) "Nigakute Bitter [Nigai and Bitter]," in Ken-ichi Seto (ed.), *Kotoba wa Aji wo Koeru* [Language Goes beyond Taste], 215-238, Kaimeisha, Tokyo.

Corpus

BNC [<http://www.corpora.jp/~scn2/bnc.html?page=top>]

Kazuki Iwahashi

kazuki_iwahashi@hotmail.co.jp