Towards Systematic Treatment of Synaesthetic Metaphor

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0. Introduction

A language is not a thing or an affair itself, but is abstract and substanceless. From this point of view, all the linguistic expressions can be said metaphorical. Moreover, as Lakoff & Johnson (1980: 3) suggest, the ordinary conceptual system which offers the bases for our thought and activity is metaphorical in its nature. Although metaphorical expressions are divided into various subclasses, so-called synaesthetic metaphor will be treated in this paper.¹ Specific to this metaphor is that, unlike other types of metaphor, it is confined to the expressions related to our senses. For this reason, the identification of sensory expressions which describe our senses received through our sense organs is needed. Then, our main purpose is to investigate the transfer system of synaesthetic metaphor.

1. Sensory Expressions


It may be questioned here whether we should admit the sense of Heat as Ullmann and Ikegami do or not, and whether we should divide the Visual sense into Dimension and Color in accordance with Williams or not. In order to satisfy the classifications of all four scholars, seven sorts of senses need to be distinguished. If we take account of psychological classification, they would be further divided. Nevertheless, as Ullmann (1951: 277-8) mentions, the classification of sensory domains should reflect the consciousness of language users. It is not our purpose to subdivide the senses as finely as possible.

In this paper, I adopt the classification that divides our senses into five subclasses as has been admitted generally. This classification represents 'the greatest common measure' of the subclasses of sense proposed by the four scholars mentioned above. Moreover, this classification agrees with the one observed in Aristotle's "De Anima" or in the Buddhist tradition.

We can obtain the following table by listing some representatives relevant
to each sensory domain according to three kinds of grammatical parts of speech.

<table>
<thead>
<tr>
<th>sensory domains</th>
<th>V</th>
<th>A</th>
<th>O</th>
<th>G</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>nouns</td>
<td>iro (color)</td>
<td>koe (voice)</td>
<td>nioi (smell)</td>
<td>azi (taste)</td>
<td>tezawari (touch)</td>
</tr>
<tr>
<td>adjectives</td>
<td>kori (yellow)</td>
<td>urusai (loud)</td>
<td>kusai (stinking)</td>
<td>anai (sweet)</td>
<td>tunetai (cold)</td>
</tr>
<tr>
<td>verbs</td>
<td>miru (look)</td>
<td>kiku (listen)</td>
<td>kagu (smell)</td>
<td>aziwai (taste)</td>
<td>sawaru (touch)</td>
</tr>
</tbody>
</table>

Table 1

It is impossible to exhaust all the lexemes applicable to this table and we do not have to do so. It may vary whether some lexeme belongs to some sensory domain or not according to the difference between persons, areas, eras and so on. However, there can be seen a certain accordance among language users to some extent.

Among these five senses, visual and auditory senses are more differentiated and independent than the other three senses which are interdependent and cooperative with each other. The former group may be called 'higher senses' and the latter 'lower senses'.

Sense impressions are often complicated and integrated. Some senses are merged to make one sense impression. For example, the sense impression 'tastiness' consists of not only gustatory sense but some other senses such as olfactory and visual senses.

We have to notice here that intermodality phenomena are observed among these senses. For example, such as seeing or touching, the visual and tactile senses can refer to the same object. Moreover, there appear consonance phenomena among different senses. For example, a visual impression can accompany an auditory impression as in the case when the higher a sound is the brighter one feels a color.

2. Systematicity of Sensory Terms

The system of sensory terms, except almost only one domain, i.e. color terms, has scarcely been investigated. Generally speaking, there are two types of sensory terms. In the first type, terms vary according to the change of the same kind of stimulus. In the second, different terms are used according to different kinds of stimuli respectively. As an example of the first type, we can consider terms describing temperature. They vary according to the change of temperature; 'hot' - 'warm' - 'cool' - 'cold'. Although the borderline is not clear, the central usage of these terms can be coincident
among language users as is observed in the case of color terms. Guststory terms belong to the second type. For example, the sensory impression of 'sweetness' itself has a difference of degree, nevertheless, no matter how the sweetness may be strengthened or weakened, it never turns to other senses; e.g. 'sourness' or 'bitterness'.

3. Synaesthetic Metaphor

The term 'loud' describing an auditory impression connects with 'color' which is relevant to a visual impression. As a very general definition, it may be said that synaesthetic metaphor is constructed by connecting one term relevant to one sensory domain with another term relevant to another sensory domain.

3.1. Some Aspects of Synaesthetic Connection

The sense which gives rise to a 'synaesthetic sense' may be called an 'original sense'. When the connected expressions of two different kinds of senses (henceforth, they will be called 'connectums') appear as linguistic expressions, they take various kinds of grammatical forms. For example, in the expression 'loud color', 'loud' is the synaesthetic sense and 'color' is the original sense. From the grammatical point of view, this expression presents an attributive connection between an adjective and a noun. In the expression 'The color was loud', the connection between an adjective and a noun is predicative. While the former example is a noun phrase, the latter is a copula sentence. In the connectums between nouns and verbs, there are also two types. They are distinguished according to whether the noun is the grammatical subject or object. For example, in 'The voice touched me', the noun is the subject of this sentence and in 'I looked at a taste' (in Japanese, 'Watasi wa azi o mita' means 'I tried a taste'), the noun is the object of this sentence.

There are many other types of synaesthetic constructions. However, the consideration in this paper will be confined to the attributive connection between adjectives and nouns. Assuming that we have five original senses and five synaesthetic senses as we have seen in Table.1, the total number of possible connectums are 25 (= 5X5). However, five of them are not synaesthetic connectums but normal connectums. Then, there are 20 synaesthetic connectums as is shown in the following table.

In this Table.2, the connectum '1 — II' stands for 'kiroi koe' (yellow voice), '2 — I' stands for 'urusai iro' (loud color) and so on. These samples are taken from Japanese and English. It will be very interesting to examine
examples from many other languages, but it is necessary for our purpose to specify the scope of investigation.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Original senses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. V iro(color)</td>
<td>2 -- I</td>
<td>3 -- I</td>
<td>4 -- I</td>
<td>5 -- I</td>
<td></td>
</tr>
<tr>
<td>II. A koe(voice)</td>
<td>1 -- II</td>
<td>3 -- II</td>
<td>4 -- II</td>
<td>5 -- II</td>
<td></td>
</tr>
<tr>
<td>III. O rioi(smell)</td>
<td>1 -- III</td>
<td>2 -- II</td>
<td>4 --III</td>
<td>5 -- III</td>
<td></td>
</tr>
<tr>
<td>IV. G azi(taste)</td>
<td>1 -- IV</td>
<td>2 -- IV</td>
<td>3 -- IV</td>
<td>5 -- IV</td>
<td></td>
</tr>
<tr>
<td>V. T tezawari(touch)</td>
<td>1 -- V</td>
<td>2 -- V</td>
<td>3 -- V</td>
<td>4 -- V</td>
<td></td>
</tr>
</tbody>
</table>

Table 2

3.2. The Directionality of Transfer in Synaesthetic Metaphor

It is quite obvious that not all connectums in Table 2 are used in the same degree of acceptability. Some connectums are more acceptable than others or vice versa. On this point, Ullmann (1951: 280) says as follows: "--- transfers tend to mount from the lower to the higher reaches of the sensorium". It will be problematic how to decide the highest, i.e. most differentiated sense and the lowest, i.e. least differentiated one, and how to order these five senses. Concerning the ordering of the relatively lower senses, i.e. tactile, gustatory and olfactory senses, all four scholars mentioned above agree with each other. Between relatively higher senses, i.e. auditory and visual ones, there may not be a clear difference, that is, we could not say which is higher than which as Ullmann (1951: 283) and Williams (1976: 464) suggest. However, the visual sense organ can distinguish the most information of all the sense organs, and it is convenient for our purpose to arrange these senses along a single line. For these reasons, the ordering in Table 1 and 2 has been adopted.

According to Ullmann, the connectum constructed by connecting the lowest (i.e. tactile) sense as a synaesthetic sense with the highest (i.e. visual) sense as an original sense, that is, '5 -- I' (tumetai iro, cold color) should be the most acceptable. On the other hand, the connectum constructed by connecting the highest sense as a synaesthetic sense with the lowest sense as an original sense, that is, '1 -- V' (kiroi tezawari, yellow touch) is supposed to be the least acceptable.
Gathering two thousand examples from twelve poets, Ullmann (1951: 282-3) says that tactile terms are the most probable source of synaesthetic terms and auditory terms become original terms most often. This problem will be investigated from another point of view in this paper. Namely, its study is based upon questioning subjects whether they use the expressions listed in Table 2 in ordinary conversation or not, or are indecisive to use them or not. From this investigation, the following general tendency can be revealed; the connectums which take the lower senses as synaesthetic senses and the higher senses as original senses are more acceptable than the connectums which take the lower senses as original senses and the higher senses as synaesthetic senses. According to Ullmann, the connectums belonging to the group upper from the right descending oblique line are more acceptable than those belonging to the group below that line. In other words, the connectums whose Arabic numerals are larger than their Roman numerals are likely to be more acceptable in Table 2.

At first, let us consider the results obtained from the subjects whose native language is Japanese. There are five connectums whose acceptability is more than 90% (more than 45 subjects of 50 accepted); '5 — I, tumetai iro: 94% ', '5 — II, tumetai koe: 96% ', '4 — II, amai koe: 100% ', '4 — III, amai nioi: 100% ', '1 — II, kiiroi koe: 100% '.

On the other hand, there are eight connectums whose acceptability is less than 20% (less than 10 subjects of 50 accepted); '1 — III, kiiroi nioi: 18% ', '1 — IV, kiiroi azi: 8% ', '1 — V, kiiroi tezawari: 2% ', '2 — III, urusai nioi: 20% ', '2 — V, urusai tezawari: 18% ', '3 — II, kusai koe: 12% ', '3 — V, kusai tezawari: 4% ', '5 — III, tumetai nioi: 20% '.

Roughly speaking, these results accord with Ullmann's claim. However, there exist some tendencies which contradict his statement. First of all, the two connectums, i.e. '3 — II' and '5 — III', are expected to have high acceptability according to him, but this is not the case. The second point is that the connectum '1 — II, kiiroi koe' is completely acceptable. This fact contradicts Ullmann's claim that the visual sense is the highest and most differentiated. For this case, Ullmann (1951: 283) explains that visual terms are more abundant than auditory ones, and more similes and images can be used for visual descriptions than for auditory ones, then, descriptions of auditory impressions needed to be supported by other sensory terms. Although his explanation seems to be plausible, the matter is further complicated. The reason is that not all the expressions belonging to this type (i.e. 1 — II) are acceptable. The following three connectums, both or one of whose elements are substituted for the expression 'kiiroi koe', have remarkably
low acceptability; 'siroi koe, white voice: 26 %', 'kiroi oto, yellow sound: 44 %', 'siroi oto, white sound: 22 %'. It can be said that the connection between 'kiroi' and 'koe' is an idiomatic connection which is fixed in Japanese and whose elements cannot be substituted.

From the above considerations, the following can be concluded. Although there is a general tendency that connectums are apt to transfer from the lower senses to the higher ones, that is, the lower senses are likely to become synaesthetic senses and the higher senses are apt to become original ones, in modern Japanese usage there is such a tendency as follows;

(I) Connectums having more than 90 % acceptability

```
      T
      |   G ------- O   A ------ V
```

(II) Connectums having less than 20 % acceptability

```
        T
        |   G -------- O   A  ------ V
```

Table.3

Secondly, let us consider the results obtained from the subjects whose native language is English. There are four connectums whose acceptability is more than 90 % (more than 20 subjects of 25 accepted); '2 -- I, loud color: 100 %', '5 -- II, cold voice: 96 %', '4 -- II, sweet voice: 100 %', '4 -- III, sweet smell: 92 %'. On the other hand, there are ten connectums whose acceptability is less than 20 % (less than 5 subjects of 25 accepted); '1 -- II, yellow voice: 0 %', '1 -- III, yellow smell: 0 %', '1 -- IV, yellow taste: 0 %', '1 -- V, yellow touch: 0 %', '2 -- III, loud smell: 8 %', '2 -- V, loud touch: 0 %', '3 -- I, stinking color: 8 %', '3 -- II, stinking voice: 8 %', '3 -- V, stinking touch: 4 %', '5 -- III, cold smell: 4 %'. As has been observed in the examples of Japanese, there is such a tendency as follows in English;

(I) Connectums having more than 90 % acceptability

```
      T
      |   G ------- O   A ------ V
```

(II) Connectums having less than 20 % acceptability

```
        T
        |   G -------- O   A  ------ V
```

Table.4
In English also there can be observed the tendency to transfer from the lower sense domains to the higher ones. Comparing Table 3 with Table 4, we can discover the difference and similarity between Japanese and English concerning synaesthetic usage. In both these languages, the three connectums, i.e. '5 — II', '4 — II' and '4 — III', have high acceptability. All the eight connectums, whose acceptability is less than 20% in Japanese, have low acceptability in English also. Here, we will notice that both these languages show the very similar tendency.

However, it is likely that the results will change when the terms chosen in this paper are altered. For example, 'yellow voice' and 'white noise', both represent the connection between visual and auditory senses, in Japanese the former is acceptable, while the latter is not, and in English vice versa. The connectum '1 — II, kiiroi koe' is peculiar to Japanese and the connectum '2 — I, loud color' is peculiar to English. Although it is necessary and interesting to study these idiomatic connectums specific to each language, it is sufficient to consider the general aspects of synaesthetic metaphor in this paper.

3.3. Multi-order Transfer

As we have seen in the previous section, there is some bias, i.e. some tendency specific to each language, in synaesthetic transfer. Considering such a bias, Williams (1976: 463) proposes the following table for the synaesthetic transfers in English.

```
<table>
<thead>
<tr>
<th>Touch</th>
<th>Taste</th>
<th>Smell</th>
<th>Dimension</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sound</td>
</tr>
</tbody>
</table>
```

Table 5

This table shows that some sensory term (e.g. a tactile term) is used for another sensory term (e.g. a gustatory term) metaphorically. He also claims that the diachronic change of sensory terms is carried out along the direction shown in Table 5. For example, the word 'dull' is listed in OED as a tactile term in 1230, as a visual term in 1430 and as an auditory term in 1475. That is, synaesthetic transfers are compiled in succession along the diachronic line according to the synaesthetic rule of transfer. However, the age listed in the dictionary may not always be correct and not always in accord with the actual usage. Moreover, as far as languages which do not have dictionaries which describe the ages of terms are concerned, it is impossible to say something about the order of such a diachronic change of synaesthetic transfer.

Of course, we can infer that the connectum 'sweet smell' is easier to
connect than the connectum 'sweet voice', because gustatory senses cooperate with olfactory ones very often. Although it is difficult to clarify the process of the diachronic change of synaesthetic transfers, this is the problem that cannot be disregarded.

3.4. Multi-layer Transfer

In the previous section, we have seen the case in which some sensory term transfers to more than two other sensory domains diachronically. In this section, we will consider the case in which more than two sensory terms are connected with each other synchronically. For example;

(1) Become the touches of sweet harmony —— : Shakespeare

(2) Taste the music of that vision pale : Keats

In the example (1), the gustatory term 'sweet' as a synaesthetic sense connects with the auditory term 'harmony' as an original sense. Let us call this connection the 'first-layer transfer'. Then, the phrase 'sweet harmony', relevant to the auditory sense, as an original sense connects with the tactile term 'tactile' as a synaesthetic sense. Let us call this connection the 'second-layer transfer'. In the example (2), the visual term 'vision pale' as an original sense connects with the auditory term 'music' as a synaesthetic sense. As the second-layer transfer, the whole phrase of 'the music of that vision pale' becomes the original sense and is connected with the verb 'taste' as the synaesthetic sense.

Now, the interrelation between the grammatical constructions and synaesthetic transfers of (1) and (2) can be shown as follows;

\[
(3) \quad N_1 \text{ of } Adj \quad + \quad N_2 \\
T(5) \rightarrow [G(4) \rightarrow A(II)] = (II)
\]

\[
(4) \quad V + N_1 \text{ of } N_2 \\
G(4') \rightarrow [A(2) \rightarrow V(1)] = (II)
\]

First of all, we notice that these transfers are all upward transfers, that is, the lower senses become synaesthetic senses and the higher sense become original senses. Secondly, it can be noted that these transfers are all unidirectional, that is, all the arrows point rightwards. Apart from the difference of grammatical constructions between (3) and (4), we can point out that the original sense of the first-layer transfer in (3), i.e. $N_2$, becomes the direct original sense of the second-layer transfer, on the
other hand, in (4) the synaesthetic sense of the first-layer transfer, i.e. \( N_1 \), becomes the direct original sense of the second-layer transfer.

Here, the parallel examples in Japanese to English ones can be constructed from Table.1 as follows;

(5) amai koe no tezawari

\[
\begin{align*}
\text{Adj} & + \text{N}_2 & \text{no} & \text{N}_1 \\
G(4) & \rightarrow [A(II)] & = A(II) & \leftarrow T(5) \\
G(4) & \rightarrow [A(II)] & \leftarrow T(5) & = T(V)
\end{align*}
\]

(6) iro no koe o aziwau

\[
\begin{align*}
\text{N}_2 & \text{no} & \text{N}_1 & + & \text{V} \\
V(I) & \leftarrow [A(2)] & = A(II) & \leftarrow G(4')
\end{align*}
\]

Comparing these examples with (3) and (4), we notice that the direction of the second-layer transfer is reversed (i.e. leftwards) owing to the different word order of these two languages. Moreover, the example (5) is ambiguous. There are two possible interpretations, i.e. '(amai koe) no tezawari' and 'amai (koe no tezawari)'. This shows the 'grouping-type ambiguity' which depends upon whether the word 'koe' belongs to the former group or the latter?

In the former, the original sense of the first-layer transfer, i.e. 'koe' = \( N_2 \), becomes the direct original sense of the second-layer transfer. In the latter, however, the synaesthetic sense of the first-layer transfer, i.e. 'tezawari' = \( N_1 \), becomes the direct original sense of the second-layer transfer.

Such multi-layer transfers as have been considered here will appear among various sense domains with various grammatical constructions; they are produced infinitely with infinite variation. It will be impossible to deal with all of them. We have considered only two examples in this paper. Both are quoted from literary works, because these complex synaesthetic metaphors scarcely appear in ordinary conversation, but are apt to appear in a case in which metaphors are used as special devices for a stylistic effect etc. It is one of verbal artists' tasks to select and combine the most suitable and effective connection among the infinitely possible connections of synaesthetic metaphors.

4. Concluding Remarks

As is shown in Table.2 and subsequent considerations, there is a possible way to treat synaesthetic metaphor systematically. It has been also pointed out that diachronic and synchronic aspects of complex synaesthetic metaphors
should be taken into account. Although the present paper could not cope with the whole range of synaesthetic metaphor, we can observe some interesting phenomena and obtain some insight concerning them, and then, we can expect to obtain more sufficient descriptions and explanations about remaining problems by continuing the study on the basis of the investigation in this paper.

Notes

1) For the fundamental considerations about the classification of metaphorical expressions, see Sakamoto (1983).

2) Such terms as Touch, Taste --- etc. are representatives of Tactile, Gustatory senses --- etc. In this paper, the latter usage is adopted. Henceforth, these terms will be abbreviated as 'T', 'G', 'O', 'A' and 'V'.

3) Berlin & Kay (1969), through the investigation of twenty languages, claim that there exists semantic universality in the domain of color terms.

4) The adequacy of the questionnaire for this purpose is expected to be further considered.

5) For the interaction between visual and auditory senses, see Reichard et al. (1949).

6) These examples are cited from Ullmann (1951: 270 & 278).

7) Another is the 'multi-value type ambiguity', which results from a case in which one and the same linguistic item has more than one values as in the case of polysemy.

References


