Lexical Semantics and Vocabulary Teaching

(語彙意味論と語彙教育)

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1. Introduction

In spite of lively controversy on lexis among philosophers and linguists, only a little attention has been paid to the application of lexical semantic theories to vocabulary teaching in the field of second language teaching. This neglect may be partly due to the immaturity of methodological rigor or discipline in semantics. As Carter (1987:145) claims, there is an underlying perception that "significant structural description and generalization is possible within syntax, where relations are finite, but less likely within lexis, where relations are theoretically infinite." In addition, it seems more difficult to find definite rules and patterns in lexis which are applicable to language teaching, because the system of lexis is interweaved with conceptualization of the world; therefore, it involves both purely linguistic and non-linguistic matters in a strict sense. Inevitably, cross-cultural differences of the conceptualization may result in creating confusion in second language learners.

This, however, does not mean that lexical semantics is useless for second language teaching. There seem to be some beneficial notions within semantics, such as *iconicity*, *core*, and *prototype*, though these will be applied to certain kinds of words and not to vocabulary as a whole. Of the three notions, *prototype* can be most effectively utilized in teaching words, in particular, polysemic words. Accordingly, this paper devotes a considerable amount of space to a prototypical analysis of an English

polysemic word and its application to vocabulary teaching.

This paper consists of five parts. In the next section, we shall see the brief sketch of *iconicity*, *core*, and *prototype*. Then, in the third section, our discussion is limited to the analysis of a specific polysemic word used as a proposition or an adverb, in order to apply Prototype Semantics into practice. In the forth section, we shall discuss it from a pedagogic point of view, and a possible method of teaching the polysemic word will be suggested. Finally, we shall conclude with a summary and some remaining problems.

2. Iconicity, Core and Prototype
2.1. Iconicity

Iconicity is a direct correlation between a linguistic representation and the entity or process in the world to which it refers.

A typical example of iconic words is onomatopoeia. The English words, *bow-wow* and *buzz*, which denote a dog or its barking sound, and continuous sound, like the sound of flying bees, or conditions related to the noise respectively, are phonically bound with their referents.

Another example for *iconicity* occurs in the number system of nouns. In English, so-called "countable nouns", which denote separable entities, bear iconical relationship between their forms, namely singular or plural, and their numbers of entities to which they refer. When a countable noun occurs in singular form, the number of entity referred to is one, whereas the number of entities is more than one when it occurs in plural form.

There are many nouns which do not follow this iconic pattern, and occur mostly in singular or plural only. However, iconic relationship can be observed even in these nouns. A good example is "summation plurals" (Quirk, et al., 1985 : 300), which occur only in plural form, and mostly

denote tools, instruments and articles of dress, such as *scissors* or *trousers*. The referents of these nouns are the objects consisting of "dual" parts. Thus, the dual form of the objects motivates these nouns to occur in plural form.

Moreover, according to Wierzbicka (1985), the formal difference of mass-words, which is often treated as apparently idiosyncratic, is also motivated by *Iconicity*. She argues that the morphological form and grammatical agreement of mass nouns reflect "iconically the way in which different classes of things and stuffs are conceptualized" (Wierzbicka, 1985 : 334). For example, let us consider two words of grain, *oats* (always plural uncountable) and *wheat* (always singular uncountable). The word *oats* occurs in plural form and does not correlate with numerals (*a few oats), because, she explains, *oats* consist of "clearly perceivable, highly noticeable separate particles" and "*oats* are so small and close together that they are not thought of as separate things that could be counted" (Wierzbicka, 1985 : 338). On the other hand, she states that *wheat* occurs in singular form because *wheat* consists of "particles which are far less conspicuous as separate object" (Wierzbicka, 1985 : 328).

It will be a good help for learners perceiving the number system of nouns consistently, if teachers point out these iconic relationships, particularly between the forms of mass-nouns and language-specific conceptualization of their referents. In the same way, if teachers mention the existence of iconic relationships between onomatopoetic words and their referents, the words will be learned easily and be quickly retrieved from learners' mental lexicon.

However, since this characteristic is limited to the certain words mentioned above, and rather many more words have arbitrary relationships with their referents, *iconicity* is obviously not versatile in language teaching.

2.2. Core

More widely applicable may be the notion of *core.* Core Approach in semantics aims at identifying a context-free meaning of a word or common properties of senses expressed by a word. Especially, semantic cores of "superordinate words" and "polysemic words" have been an object of study among philosophers and linguists for a long time.

Let us take an example of a superordinate noun *bird.* Under *bird,* hyponyms such as *robin, seagull, swallow, flamingo,* and so forth, are subsumed; in other words, *bird* is a category name and *robin, seagull,* etc. are members of the category. The properties shared with all these hyponyms are regarded as the semantic core of *a bird.*

As for polysemies, some of common ones are verbs such as *have, get, take,* and prepositions (which are often used also as adverbs) such as *on, off, over, out, up.* These words can express a variety of senses when combined with other words and phrases in different contexts. If various senses expressed by a polysemic word can be abstracted into one semantic core, the labor of leaning all the senses by rote will be dramatically eased, and having learners recognize the cores of polysemies will be a wise method in vocabulary teaching.

Core Approach, however, poses a problem. Identifying semantic core of a word does not, in many cases, result in success, but results in contradiction or failure. Aitchison (1987 : 44) goes further to claim that identifying semantic core is "an impossible test." She states that if the core condition, namely, necessary condition of a *tiger* is "a large Asian yellow-brown black-striped carnivorous maneless feline, then a three legged, lame, toothless, albino tiger cannot be a tiger, though it is actually a tiger" (Aitchison, 1987 : 45). Similarly, after examining various senses of a polysemy, we often find that there are some senses to which the supposed semantic core

cannot apply.　I shall give an example of this point later on in section **3.2.**.

2.3. Prototype

Prototype Semantics has been highly evaluated in this decade mainly because the cognitive approach supplements shortcomings of Core Approach.

Prototype Semantics originates from Prototype Theory in the field of psychology.　As is well-known, Prototype Theory has been proposed and developed by a psychologist, E. Rosch.　According to Rosch (1973), human categorization is performed on the basis of the cognitively most salient reference points, called "basic-level objects", and the members of one category are graded by degree of membership, from prototypical to peripheral.　In addition, Rosch and Mervis (1975) have empirically demonstrated that the network of category members may be based on the relationship of "family resemblances", which was first proposed by Wittgenstein (1953 : 32).　The idea is that each member of a category has at least one, and usually several, elements in common with one or more other members, but no or few elements are common to all members.

In Prototype Theory, the tiger with the above-mentioned characteristics of "a large Asian yellow-brown black-striped carnivorous maneless feline" is regarded as a prototypical tiger, whereas the albino tiger as a less typical tiger or a peripheral member of tigers.　Thus, Prototype Theory seems to reflect the reality of the relation between human conceptualization of entities in the world and language.

While most psychologists on the line of Prototype Theory have been concerned with natural categorizations of physical objects, some linguists have expanded the research domain into polysemic words.

Brugman (1981) is the first to propose explicitly the idea that "lexical items are natural categories of senses" (cited from Lakoff (1987 : 418)).
It means that senses of a polysemy form a category as well.　In the

pioneering study, she has examined one hundred kinds of uses of *over* in terms of Prototype Theory. This research became one of the incentives which initiated Prototype Semantics, and it has been developed into a more systematic theory with the introduction of semantic transfer through metaphor and metonymy by Lakoff (1987).

Following the method which Lakoff has advocated in Prototype Semantics, I shall demonstrate a semantic analysis of a polysemic word *out* in the next section.

3. Polysemy : The Case of *OUT*
3.1. Descriptions in Dictionaries

The word, *out*, is a polysemic word in that it expresses a variety of senses. This is evident from the large quantity of space allocated for the entries of *out* in dictionaries, as shown below :

(1) *Collins COBUILD English Language Dictionary* (1987 : 1019-1020) :

. . . 1 You use **out** 1.1 to indicate away from a place, for example from a room, a building or a vehicle. EG She rushed out of the house . . . . . . **1.2** to indicate someone is away from their usual place in order to do a particular job . . . . **1.3** to indicate that someone is absent from their home or work for a short time . . . . **1.4** to indicate that someone is absent from home for a social activity, such as going to the cinema or to a restaurant. EG Do you eat out a lot ? . . . . . . (continued to 1.14) **1.14** to indicate that someone or something makes a particular sound, especially a loud sound. EG She let out a shriek . . . . . . / **2** You use **out** 2.1 to indicate that something removed from a container or place where it is enclosed . . . . **2.2,** (continued to 2.7) **2.7** to indicate that information or facts that were secret have been revealed . . . . **2.8** to indicate that something is or becomes available to the public . . . . / **3** You use **out** 3.1 to indicate that something is no longer burning, shining, functioning, etc . . . . (continued to 3.4) **3.4** to indicate that fashions, styles, clothes, etc are unfashionable . . . . / **4**

You use **out of 4.1** to indicate why someone does something . . . . (continued to **4.11**) **4.11** to indicate that someone is sheltered from a particular kind of weather . . . . /**5** When plants or flowers are **out**, they have flowers that are fully open . . . . /**6** If someone is **out** for something, they want or intend to achieve that thing . . . . /**7** If workers are **out**, they are on strike ; . . . /**8** You also use **out** to indicate that a particular period of time is finished . . . . /**9** If you say that something such as calculation or measurement is **out**, you mean that it is incorrect . . . .

(2) *Webster's New Collegiate Dictionary* (1979 : 807) :

. . . **1** a : in a direction away from the inside or center〈went 〜 into the garden〉 b : from among others c : away from the shore d : away from home or business 〈〜 to lunch〉/**2** a : out of the usual or proper place 〈left a word 〜〉 . . . b : beyond possession, control, or occupation 〈lent money〜〉 c : into a state of loss or deprivation〈voted him〜〉 d : into a state of vexation or disagreement . . . e : into portions, shares or allotments 〈parceled 〜 the farm〉/**3** a : beyond the limit of existence, continuance, or supply〈the food ran 〜〉 b : to extinction, exhaustion, or completion 〈burn 〜〉 . . . c : to the fullest extent or degree 〈all decked 〜〉 d : in or into completion or determined effort . . . /**4** a : in or into the open 〈the sun came 〜〉 b : ALOUD 〈cried 〜〉 c : in or into public circulation . . . /**5** a : so as to put out a batter, batsman, or base runner b : so as to be put out /**6** --used on a two way radio circuit to indicate that a message is complete and no reply is expected.

(3) *Oxford Advanced Learners' Dictionary* (1989 : 876) :

. . . **1** away from or not inside a place : go out for some fresh air . . . **2** (a) not at home or at a place of work : . . . **2** (b) (of a book, record, etc) not in the library : . . . **3** (indicating distance away from land, one's country, a town, etc) : The boats are all out at sea . . . . **4** (indicating that sth is no longer hidden) : The secret is out, ie revealed or discovered . . . . **5** (used with superlative adjs) in existence : among known examples : . . . **6** not in power, in office or in a position : . . . **7** not fashionable : . . . **8** unconscious : . . . **9** (of a tide) away from the shore : low : . . . **10** on strike : . . . **11** (infml) not possible or desirable : . . . **12** (of fire, lights, burning materials, etc) extinguished ; not burning : . . . **13** to

the end ; completely : work out a problem . . . . **14** clearly and loudly ; without hesitation : call╱cry shout out . . . . **15** (indicating a mistake) more or less than the correct amount : . . . **16** (sport). . . . **17** (idm) all out . . .

(Omissions are mine)

The three dictionaries cited here are *COBUILD English Language Dictionary, Webster's New Collegiate Dictionary,* and *Oxford Advanced Learners' Dictionary,* all of which are major dictionaries compiled specially for second language learners of English. Let us devote a little space to examine how each dictionary treats the word.

The analyses and presentations of *out* are quite different in the three dictionaries. In *COBUILD,* almost all "usages" of the word are covered in two pages, divided into 9 kinds of usage groups, several of which have a dozen of sub-items. In *Webster's New Collegiate Dictionary,* all of its senses are condensed into only 6 groups of definitions, each of which consists of three or four closely related, more minute senses. In *Oxford Advanced Learners' Dictionary,* all the senses are divided into 17 kinds. In all three dictionaries, items seem to be presented in the order from the commonest ones to the most peripheral ones.

The evaluation of the three dictionaries may be, of course, dependent on purposes and levels of learners. If we consult a dictionary in order to check exactly in which sense the word in question in a certain phrase or sentence is used, concrete, example-oriented *COBUILD* will be most helpful because of the extraordinarily large number of usage entries; or *Oxford Advanced Learners' Dictionary* will be recommended to find a close answer for it in a shorter time.

On the other hand, in order to grasp and learn the meaning of the word as a whole, *Webster's New Collegiate Dictionary* may be most effective, not only because all the senses are divided only into 6 groups, but also

because a central notion or a semantic core of each group is presented in
the dictionary. However, the definitions might be a little too abstract
and the poverty of examples might be problematic with this dictionary.

As is evident from the above, lexicographers have defined the meaning
of *out* mostly by clustering several independent senses or usages. In terms
of semantics, then, the problem is how we condense or generalize all of
the senses, and probably more importantly, how we can describe "relations"
between these senses. I shall suggest one possible solution for the question
in the following section by means of a prototypical analysis of the word.

3.2. Prototypical Analysis of *OUT*

Let us consider *out* in accordance with the line of Prototype Semantics
proposed by Lakoff (1987). The characteristics of his analysis are the usage
of metaphor (i.e., transfer based on similarity) and metonymy (i.e., transfer
based on contiguity) to relate various senses, and the usage of imagery
schemas to explain the network of relationships more impressively. Lindner
(1982) has also analyzed *out* in this way. She characterizes *out* as a natural
category of images related to a prototype via family resemblance, and
presents several imagery schemas of the word. Her imagery schemas have
inspired some parts of my analysis presented hereafter. In my analysis,
a variety of senses of *out* are divided into five kinds, which cover most
of the senses listed in the dictionaries cited above, and imagery schemas
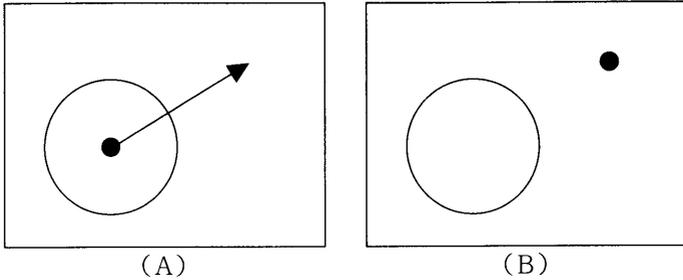are provided for each of them.

First of all, let us consider the sense of *out* in the sentence below:

(1a) She went out.

In (1a), *out* expresses the sense of "away from a place", probably from
a home, a room, or a building. The conceptual scene can be schematically

represented as in Fig.1, which is similar to the schema illustrated in Lindner (1982 : 308) :

Fig.1

(A)   (B)

The dot in Fig.1 indicates "she"; the arrow indicates the path of "she"; and the circle indicates the place or enclosure (e.g., a room, a building, etc.). The dot, arrow, and circle are termed "trajector", "trajectory", and "landmark" respectively. Fig.1(A) depicts the process of "going out", while Fig.1(B) depicts the state of "being out", or the resultant state of an action or process expressed by the verb phrase.

I assume that the sense expressed in this imagery schema is the proto-type of *out* in that it is most basic, least restrictive, and bears the most family resemblances to the other senses of *out*. There is a considerable amount of variation in this image schema. Consider the next sentences :

(1b) Long skirts are out this year. (unfashionable)

(1c) You are out in calculation. (incorrect)

The images of *out* in (1b) and (1c) can be illustrated in Fig.1 (B) in a similar way. Suppose that a spatial enclosure is metaphorically transferred into the abstract concept of "the trend of this year", the trajector outside

of the landmark corresponds to "long skirts" in (1b). The state of "long skirts" being away from "the trend of this year" is equivalent to "unfashionable".

Similarly, in (1c), the state of "being correct" in calculation can be regarded as a metaphorical enclosure. When the trajector "you" is away from the correct area, it expresses "incorrect" sense. Thus, both "unfashionable" sense and "incorrect" sense can be related to "away from a place" sense in Fig.1 (B).

Secondly, there is the case that the landmark does not have to be a spatial or abstract enclosure. Some examples are given below :

(2a) He picked out a present for his friend.

(2b) The teacher pointed out an error in his student's answers.

(2c) The coach singled him out as captain of the football team.

In (2a), (2b) and (2c), *out* expresses "selecting" sense. Here the landmark is not an enclosure as in Fig.1, but rather a group of which the trajector is a member. The removal of a member from the group constitutes a version of *out*. Fig.2 illustrates the image of "selecting" sense :

Fig.2
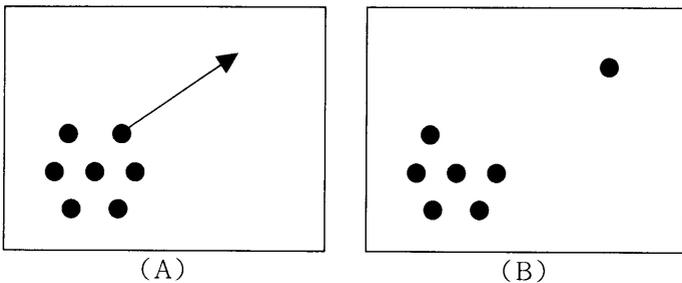
(Based on Lindner (1982 : 309), the arrow is my addition)

The arrow in Fig.2 (A) indicates the trajectory, or the process of action expressed by each verb phrase, "pick out", "point out" and "single out". Fig.2 (B) depicts the resultant state of the process or action. The collective members of the group in Fig.2 correspond to "choices for the present", "all of his student's answers" and "all the players of the football team", and the member removed from the group is "a present", "an error" and "him" in (2a), (2b), and (2c) respectively.

As shown in Fig.2 (B), the member removed from the group is exposed in the state of isolation, which tends to attract our attention. Thus, "outstanding" sense, like in the sentence below, is yielded from the Fig. 2 (B):

(2d) Ann is so cute that she stands out in class. (outstanding)

Since the state of isolation can be considered an attribute of Fig.2, "outstanding" sense is connected to "selecting" sense by way of metonymy.

The third sense of *out* is "into the light" as shown in the sentence below :

(3a) The star came out. (visible)

"The star" in (3a), which had been hidden probably behind clouds, moved away from them, and came into our sight. This image is illustrated in Fig.3 :

Fig.3

(A)　　　　　　　　　　　(B)
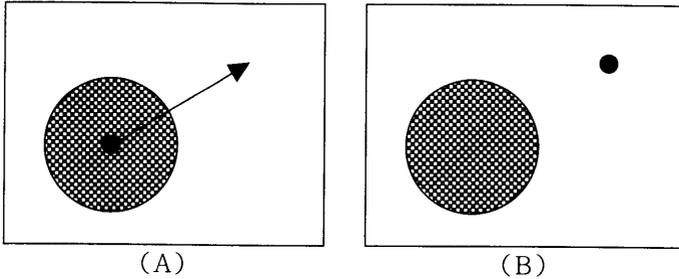
This picture is identical with Fig.1, except that the landmark is darkened. It is darkened so that the trajector inside of the spatial landmark will be impossible to perceive. Moving away from the landmark, the trajector comes into the light. The darkened landmark corresponds to "clouds", and the trajector to "the star" in the case of (3a).

Fig.3 can be also applied to other sentences in which the landmark is transferred from a concrete spatial enclosure to an abstract one. Consider the following sentences :

(3b) His book came out. (into public)

(3c) The rumor turned out to be true. (revealed)

In (3b), "his book" had been a private manuscript owned by him. The trajector "his book" had been hidden inside the landmark, namely in his private world. Later, the book came into the outside world ; thus, *out* can be interpreted as "into public".

Likewise, in (3c), the landmark is also a private world unknown to others. When moving away from the enclosure to the outside world, the trajector "the real fact of the rumor" was disclosed and revealed to be true.

The forth is "into extinction" sense. The example for this sense is given below :

(4a) The light went out. (invisible)

This sense might appear to be opposite to the previous sense of "into the light" in (3a), (3b) and (3c). As Lindner (1982) notes, *out* can express both visible and invisible senses, and the difference can be explained in terms of the speaker's viewpoint. Her idea of viewpoints is differently represented in my analysis, where I propose the location of the darkened area and the undarkened area is determined according to the speaker's perceptual orientation. In the previous case of Fig.3, the perceptual orientation is set toward the outside of the enclosure and thus its inside is darkened. On the other hand, in (4a), it is set toward the inside of the enclosure and the area around the enclosure is darkened, as seen in Fig.4 :

Fig.4

(A)　　　　　　　　(B)
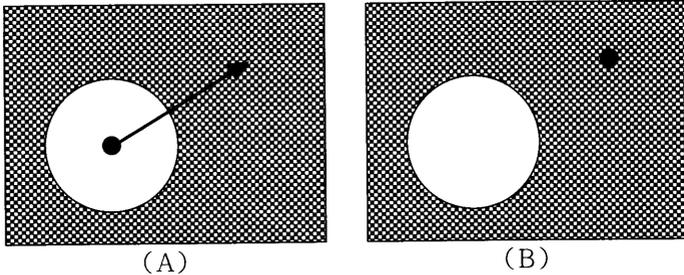
In (4a), the landmark is an enclosure which indicates the range of our perceptual access. When moving away from the range, the trajector "the light" came into darkness and became invisible.

A further example is (4b):

(4b) I was knocked out. (into unconsciousness)

The state of consciousness is an abstract enclosure here. By being knocked out, the trajector "I" moved away from the state of consciousness.

Thus, "into unconsciousness" sense can be also illustrated in Fig.4 above.

The final sense of *out* is "to the end". In this case, the trajector some-times consists of collective members. Fig.5 illustrates this image :

Fig.5

(A)   (B)
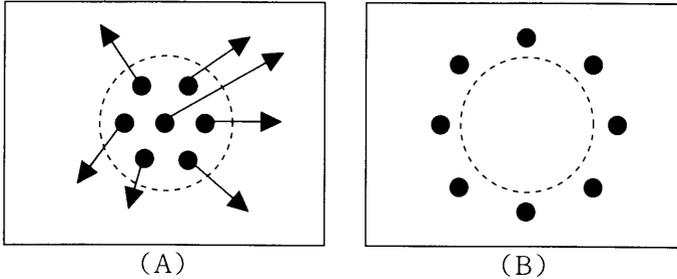
The members of the trajector move from the enclosure one after another until no member is left. At the final stage of this process, as shown in Fig.5 (B), no member is left inside the enclosure, and the process of moving away comes to the end. (5a) and (5b) are examples for this sense :

(5a) He washed the stains out. (completely)
(5b) Our supplies have run out. (nothing left)

In (5a), "the stains" are the members of the trajector, and some sort of clothing, a shirt or an apron for example, is the landmark indicated in the circle in Fig.5. In (5b), the members of the trajector are "our supplies" and the landmark is an abstract enclosure, "the state of our possession". The total removal of these members from these spatial or abstract enclosures leads to the state of complete cleanness or emptiness.

So far, many seemingly independent senses of *out* have been characterized by the five imagery schemas. Now let us turn to the network of these senses, which is shown in Fig.6 :

Fig.6
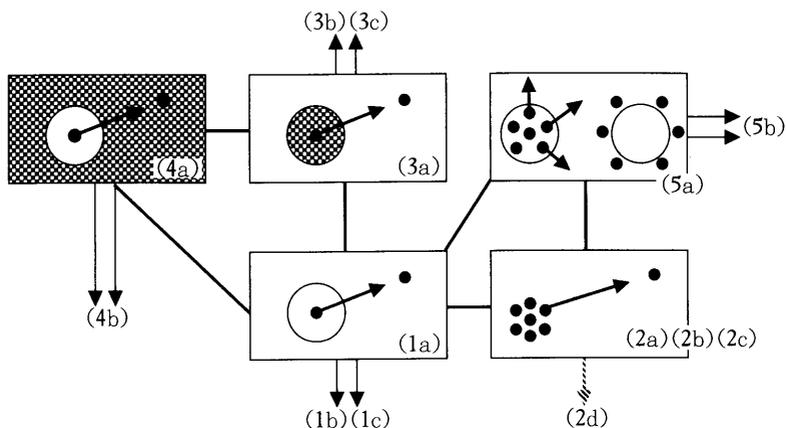
In Fig.6, single lines indicate relations by family resemblances ; double lines indicate transfer by way of metaphor, mostly between a physical space and a conceptual space ; and dotted lines indicate transfer by way of metonymy between one phase and another phase of the whole successive process (e.g., an action and its result).

Note that every schema has something in common with some of the other schemas, but nothing is shared with all the schemas. This relationship proves that extracting a single semantic core from all senses is impractical in analyzing a polysemic word. Alternatively, in terms of Prototype Semantics, "away from a place" as in (1a) is treated as the prototypical sense of *out* and the other less basic senses are related to the prototype by family resemblances, metaphor and metonymy.

Thus, various senses of *out* are systematically related, and the network of each sense is fully described in terms of Prototype Semantics. It will be highly possible to systematize the rest of senses expressed by *out* in this way, though I cannot go further because of the lack of space and pointless repetition of the similar analysis.

4. Application to Vocabulary Teaching

The next, more important problem is how we can utilize this semantic analysis for pedagogy. Not the acquisition of the prototype but that of the relations of other members to the prototype will be a more crucial matter, because prototype is by definition easy to learn. (This is analogically supported by the fact in first language acquisition that children of age three have already known prototypes the same as adults' in their categorization.)

As demonstrated above, although Prototype Semantics provides the way to connect other members to the central member systematically, still the system is too complicated for vocabulary teaching, partly because the prototype has too large a number of branches to cover, and partly because it depends on metalinguistic concept of metaphor and metonymy.

One of the practical methods for teaching *out* may be the use of an imagery gestalt comprising a series of schemas. In other words, it is the use of the picture in which all of the five schemas presented so far are united, and by which all the senses can be captured with the help of procedural explanations (see Shimo and Tone (1991) for similar analyses). Let us look at Fig.7 below :
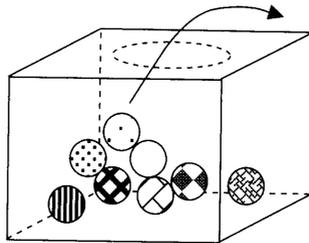
Fig.7

Fig.7 has neatly incorporated different elements of schemas, such as the enclosure, collective members of trajector, and speaker's orientation (i.e., location of a darkened area), into a single practical picture. Imagine that we have a box in which some colored balls are contained, just like a lottery box. First, we put our hand into the box and take out one of the balls, as the arrow indicates in Fig.7, and the lottery starts. This action signifies the prototypical sense "away from a place" in Fig.1 and "selecting" sense in Fig.2. This image can cover phases like *go out, take out, pick out, leave out, point out, single out, rule out, drop out, eat out, set out, break out,* and so on.

Secondly, as the result of the action, the ball we have taken has "come into the light", and its color is revealed. We now know the result of the lottery. This state is the same as the image illustrated in Fig.3. The phrases this image can cover are : *turn out, make out, figure out, come out, bring out, find out, work out, puzzle out,* and so on.

Thirdly, while we are continuing this game, all the balls are taken out and none is left inside ; therefore, the game comes "to the end" and it is finished and completed. The process and state expressed at this stage are illustrated in Fig.4 and Fig.5. The phrases this stage can cover are : *put out, go out, be out, blow out, run out, die out, wear out, be tired out, carry out, be sold out, hear...out,* and so forth.

Thus, most of the senses of *out* are integrated within one gestalt. The advantage of this method is that a single imagery gestalt enables learners to reduce the burden of rote memorization. Moreover, based on this gestalt, learners can even guess senses of *out* they have never come across before.

However, it is not always easy to device an appropriate gestalt like this for every polysemy ; therefore, more analyses and practical ideas will be required for the further application.

5. Summary and Remaining Problems

We have seen that *iconicity, core* and *prototype* can contribute to vocabulary teaching. Among all, Prototype Semantics can play an important role in teaching polysemic words. Especially, the use of a gestalt picture in which several image schemas are integrated can be more effective than the mere use of complicated explanation.

However, when we try to apply Prototype Semantics to vocabulary teaching, we may need to notice some problems. The most fundamental problem is the fact that categorization is sometimes subject to cultural or environmental differences. For example, in the case of a noun, like *bird,* the prototype of *a bird* is claimed to be a *robin* in Britain, while a *sparrow* may be more typical in Japan. Aitchison (1992 : 82) claims that "the rankings are closely bound up with culture, and it might not be useful to hand over to, say, people in India a ranking system for birds or vegetables which is closely tied to a far-away geographical area." Indeed, it is questionable whether second language learners have to learn the system of categorization in their target language in order to acquire the language. Teachers may need to know the existence of possible cross-cultural differences in categorizations of these physical objects, but the application of Prototype Semantics to vocabulary teaching should not include superordinate words of physical objects and be limited into polysemic words.

The second problem is whether theoretical prototypes are actually psychologically salient in the mind of speakers. Even if linguists assume that one sense of a polysemy is prototypical, it is not always identical to the sense most native speakers of a target language treat as basic or recall most quickly. We may, therefore, need to examine the validity of theoretical prototypes by psychological experiments.

The last, but not least, may be the problem of frequency. There is a

possibility that a prototypical sense is not necessarily the most frequently used one in the real world. Most Japanese may say that the prototype of *a bird* is a *sparrow*, but a bird Japanese talk about most frequently may be a *craw*. Similarly, as for an English adjective, *cool*, "sophisticated" sense may be the top in terms of frequency, but "low in temperature" may be the top in terms of theory or speakers' psychological saliency. Possibly, this sort of discrepancy can be observed even in verbs, adverbs, prepositions, or the rest of function words. Then, we may wonder which sense, frequently used or prototypical, is more pedagogically significant or which sense is more important for learners to learn. To find a definite answer for this difficult question, further investigation and discussion need to be done.

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