

## A Semantic Study of the Prefix *over-* and the Norm of Evaluation\*

Shoichi Yamada

### 1. Introduction

In this paper, I am concerned with the semantics of the prefix *over-*. It is attached to verbs and means “excessive” as in the examples in (1).<sup>1</sup>

- (1) a. He overvalues his daughter.  
 b. She oversupplies her children with junk foods.  
 c. Batson overworked his staff mercilessly.  
 d. The actress overacted her part.

The examples in (1) show that the degree of the acts of the base verbs is too much more than expected or than usual.

Concerning the prefix *over-*, some interesting facts have been pointed out in the literature (Fraser 1971, Bauer 1983, and Yumoto 1997). First, it sometimes changes transitivity or selectional restriction of the base verb, as in the following examples (taken from Yumoto 1997).

- (2) a. John overheated the room. (cf. John heated the room.)  
 b. John overeat (\*apples).  
 c. John overslept a fixed time. (cf. \*John slept a fixed time.)  
 d. They overbuilt {the city/\*houses}. (cf. \*They built the city.)

The example in (2a) shows that *over-* does not change transitivity nor selectional restriction of the base verb, *heat*. In (2b), *overeat* cannot take as its direct object a noun phrase *apple* which the base verb *eat* can take. In (2c), the intransitive verb *sleep* is changed into a transitive verb when *over-* is attached. (2d) indicates that *overbuild* can only take as its direct object a locative noun phrase, but not a thing being built.

Second, not all verbs are allowed this prefixation though *over-* is said to be a productive prefix in present-day English, as in (3) (Williams 1993).

- (3) a. \* John overresembles Bill.

\* This paper is a revised version of part of my M.A.thesis submitted to University of Tsukuba in December in 1999. I am grateful to Minoru Nakau, Yukio Hirose, Yasuaki Fujiwara, and Ryuichi Washio for their invaluable comments for that thesis. I am indebted to Keigo Yamada, Akiko Miyata, Hiroyuki Tahara, and Koichi Sekizuka, who read an earlier version of this paper and gave me many suggestions. Of course, all remaining errors and inadequacies are my own.

<sup>1</sup> This prefix is known to be productive in present-day English. It can be attached to the other parts of speech, e.g., nouns and adjectives. In this paper, I take up only the combination of *over-* + verbs.

- b. \* The dam overcontained the water.
- c. \* John overdied.
- d. \* Bill overbroke the window.

*Over-* is not allowed to be attached to stative verbs such as *resemble* and *contain*, as in (3a) and (3b), and achievement verbs such as *die* and *break*, as in (3c) and (3d).

Third, the prefix *under-*, which has an opposite meaning of *over-*, can be attached to verbs as a counterpart of *over-*, as in (4).

- (4) We can advise your shop on those difficult purchasing decisions, and where to find the best deals. Don't overbuy, don't underbuy.

However, there is a case in which only *over-* is allowed to be attached as in (5).

- (5) a. John overexcited the audience.  
 b. \* John underexcited the audience. (Williams 1993:277)

*Over-* can be attached to the verb *excite* and means 'excite too much,' but the prefixation of *under-* is not allowed.

Before going on a discussion, a remark should be made on the distinction of senses of *over-*. It is well known that *over-* has roughly two senses. One is a spatial sense and the other is an excessive sense. Marchand (1969) and Quirk et al. (1985) differentiate between the two senses and classify the former as a spatial particle and the latter as a prefix. Under this classification, a word with the form "over- + X" is a compound in the former case and it is a derivation in the latter case. This means that they are different from each other not only semantically but also morphologically. However, it is obvious that they are derived from the same word, the preposition *over*. So such a classification is not important from the cognitive linguistic point of view. In recent years, *over-* is regarded as prefix whether it has a spatial sense or an excessive sense. I also regard *over-* as a prefix whether it has a spatial sense or an excessive sense. In this paper, I focus exclusively on the latter sense.<sup>2</sup>

The aim of this paper is to examine how the meaning of *over-* relates to the phenomena mentioned above. In section 2, I will survey previous studies. In section 3, I will attempt to account for the phenomena mentioned above by introducing a notion of normal state. It is a crucial factor in defining the norm of evaluation in some cases. Section 4 makes concluding remarks.

## 2. Previous Studies

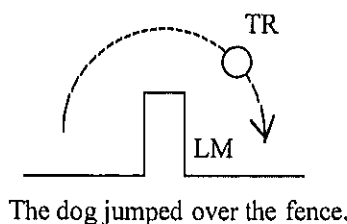
There are numerous discussions on the grammatical function and meaning of the preposition *over*. Notably Lakoff (1987), Dewell (1992), and Kreitzer (1997) try

<sup>2</sup> The difference between a spatial sense and an excessive sense of *over-* is discussed in Yamada (to appear).

to capture the meaning of the preposition within the framework of cognitive linguistics. But little research has been done on the semantics of the prefix *over-*. Among them, however, in Lakoff's discussion there is a brief reference to a cognitive motivation for the "excess" sense, which is expressed only if *over* is used as a prefix. After his analysis, there are some studies which deal with the prefix *over-*. In this section, I will review these previous studies on the prefix. Firstly let us take up Lakoff's discussion for the prefix in the next section. In section 2.2 I will examine Williams (1993) and point out that his argument is insufficient. In 2.3 I will review Yumoto's (1997) Lexical Conceptual Structure (LCS) analysis .

### 2.1 Lakoff (1987)

Lakoff (1987) discusses the polysemy of the preposition *over* and concludes that various senses of the preposition are derived from a prototype, that is, the central sense of *over*: a combination of *above* and *across*. The excess sense of prefix *over-* is derived from a link between the excess schema in general and the schema shown in Figure 1.



(Lakoff 1987: p.434, Fig. 26.)

Figure 1

This schema is a variant of the prototype schema and is exemplified by the sentence *The dog jumped over the fence*. He argues that a word *overflow* provides the link. For overflowing to take place, it is presupposed that there is the existence of a container and a fluid in it. The container has vertical sides and the path of the overflowing fluid is upward and over the side of the container. This makes the link between *over* of *overflow* and the schema in figure 1. In this schema, LM (landmark) is the side of the container, PATH is the path of the flow, and TR (trajector) is the level of the fluid. The height of the LM also defines the maximal normal amount of fluid. Thus, flowing over the LM constitutes exceeding the norm. He also argues that the excess schema is extended to activity in general by the metaphor "ACTIVITY IS A CONTAINER." For example, *overdoing* something involves putting more than the maximal normal amount of effort into an activity that is required to achieve the goal.

He concludes that the excess sense of *over-* is motivated by the image schema

which is derived by the schema in figure 1 plus metaphor. However, he does not refer to such grammatical phenomenon as observed in section 1.

In his analysis, the most important notion is the metaphor “AN ACTIVITY IS A CONTAINER.” This metaphor motivates the extensive use of spatial concept *over-* to the more abstract concept. This point will be discussed in detail in section 3.1.

## 2.2 Williams (1993)

Williams (1993) makes a comparative study of the prefixes *over-*, *under-* and *out-*. He calls preposition-verb constructions formed with these prefixes the comparative preposition-verb construction. In his discussion, there are some remarkable points. Firstly, he points out that *over-* cannot be attached to the verbs which describe an imperfective event.

- (6) a. \* John overresembles Bill.  
b. \* The dam overcontained the water.

The stem verbs *resemble* and *contain* typically describe an ongoing unchanging relation which is not temporally bounded. Therefore these verbs cannot enter into the comparative construction, i.e., they do not conform to the concept of *over-*. Similarly, *over-* cannot be attached to achievement verbs like *die* and *break*, either as in (7).

- (7) a. \* John overdied.  
b. \* Bill overbroke the window.

These forms are unacceptable because only the final state of the event is cognitively salient.

Secondly, he points out the difference in behavior between *over-* and *under-*.

- (8) a. John overexcited the audience.  
b. \* John underexcited the audience.  
c. John overdried the fish.  
d. \* John underdried the fish.

Verbs such as *excite* and *dry* conform to *over-* but not *under-*. Because these verbs contain a notion of threshold, which is starting point of event, an event itself is not realized if the threshold is not realized. To express such situations, it is natural to use sentences like (9).

- (9) a. John failed to excite the audience.  
b. John didn't finish drying the fish.

Though the notions mentioned above are plausible, there is a problem with his analysis. He generalizes from the example in (10) and concludes that the prefix *over-* does not affect transitivity of the base verb, as in (10).

- (10) a. \* John extended.

- b. John extended his credit.
- c. \* John overextended.
- d. John overextended his credit.

The verb *extend* is transitive and the derived form *overextend* is also transitive. This generalization cannot, however, be applied in all cases.

### 2.3 Yumoto (1997)

Yumoto (1997) tries to formalize the semantic function of the prefix *over-* within the framework of Lexical Conceptual Structure (LCS)<sup>3</sup>. She argues that *over-* with an excessive sense should be analyzed in the same way as *over-* that maintains a spatial sense.

As a piece of supporting evidence for her assumption, she argues that the object of *over-* + V that maintains a spatial sense is the argument of the preposition *over*.

- (11) a. overflow the banks: 'flow over the banks'
- b. overrun the line: 'run over the line'
- c. overfly the territory: 'fly over the territory'
- d. overleap the fence: 'leap over the fence'
- e. overgrow the garden: 'grow over the garden'

The sentences in (12) indicate that the base verbs of *over-* + V are intransitive, so it follows that the prefix *over-* adds its argument to the base verbs. She points out that the same applies to the case of *over-* with the excessive sense.

- (12) a. oversleep the fixed time (cf. \*sleep the time)
- b. the new loan which was oversubscribed (cf. \*subscribe the loan)
- c. overstay one's welcome (cf. \*stay one's welcome)

She also discusses the cases where *over-* sometimes affects the selectional restriction of the base verbs.

- (13) a. overshoot {\*the gun/the target} (cf. shoot the gun over the target)
- b. overthrow {\*a ball/the base} (cf. throw a ball over the base)
- c. overbuild {\*houses/the city} (cf. build a house in the city)
- d. overcut {\*trees/the forests} (cf. cut the trees of/in the forests)
- e. overdraw {\*the money/the account} (cf. draw money from the account)

The examples in (13) show that the derived verb cannot take as direct object the Theme that the base verb can, whether *over-* maintains a spatial sense or not. Instead, it selects a locative argument as direct object.

From the discussion above, she arrives at the generalization that *over-* +V verbs are

<sup>3</sup> Kageyama & Yumoto (1997) also discusses the semantic behavior of *over-* + V drawing a comparison with Japanese V+*sugiru*. The argument is almost the same as Yumoto (1997).

necessarily transitive and the direct object is an argument of *over-*.

However, as she also notices, there are some problematic cases for the generalization.

- (14) a. overheat the room: 'cause the room to become too hot'  
 b. oversimplify the rule: 'cause the rule to become too simple'  
 c. overrefine, overextend, overboil, oversocialize, overpurify

These verbs are transitive and denote the change of state of the object. But the direct object of these verbs are the same as that of the base verbs, so it is impossible to regard as the argument of *over-*.

As a solution to this difficulty, she proposes to employ semantic concepts like HOT or SIMPLE which represent a maximal norm of degree. She argues that these concepts are captured only on the level of LCS. In this case, the argument of the Place function is Property, instead of Thing, as in (15).

- (15) a. *overrun*  
 [GO([Thing<sub>i</sub>], [Path TO([Place OVER([Thing<sub>j</sub>])])])])  
 b. *overheat*  
 [CAUSE([Thing<sub>i</sub>], [INCH([State BE<sub>Ident</sub> ([Place OVER([Property HOT])])])])])]

From the discussion above, she generalizes the function of OVER in the LCS, formulating the *over-* prefixation as in the following.

- (16) *over-* V: [[GO([ ], [Path TO([Place OVER([ ])])])]] or  
 [...[INCH([BE([ ], [Place OVER([ ])])])]]]

She also explains why *over-* cannot be combined with stative verbs. Since stative verbs are atmporal, they do not conform to INCH or GO in the LCS.

She recognizes that there is a problem concerning this point, too. She regards *overstay* is an exceptional case since the base verb *stay* is stative. However, there is a point she overlooks. Nakau (1994) points out that *stay* describes not only a state, but also a process, i.e., it is a non-stative verb.

- (17) Cats will stay out of the garbage if people want them to do so.

He points out that because the antecedent of *do so* must be a non-state, *stay* in this sentence is not stative, but processual. Yumoto's observation lacks this point of view.

She mentions that the some verbs change into transitive verbs when *over-* is attached.

- (18) a. John overate (\*apples)

This fact is originally pointed out (to my knowledge) in Roeper and Siegel (1978). Bauer (1983) also refers to it. Their observation are, however, concerned only to its morphological aspect. A precise analysis concerning to its semantic aspects has not

been done until recent years. The example in (18) is against her generalization. To explain this fact, she employs LCS with subordination. However, that Levin and Rappaport (1995) remarks that the subordination of LCS is an inappropriate device.<sup>4</sup>

Moreover, the example in (19) seems to be an exceptional case to her generalization.

- (19) We overbuild our pools. Where the industry standard may be 10 to 12 inches of concrete, we use 14 inches.

(American Builder Magazine Article)

In this example, *overbuild* takes Theme as direct object and the meaning of *overbuild* in this sentence is slightly different from the one in (13c). This point will be discussed in section 3.

In the following section, I will propose an analysis including the example such as (19) and it is different from Yumoto's analysis. Because within the framework of LCS it is difficult to define the norm of judgement of excessive sense that is crucial to evaluation and I regard it as the most important factor of the grammatical behavior which is caused by the prefixation.

### 3. An Analysis of *over-*+ V

When we speak of something excessive, we judge its value in light of the relevant norm of comparison. In this section, I will elucidate what the norm is like. The norm of the comparison is not always the same. In many cases, "over- + V" takes a noun phrase which defines the norm. In some cases, however, the noun phrase which appears in object position does not define the norm by itself. The norms of the evaluation are different from each other in their subjectivity and they are roughly classified into three types. The difference is crucial for construal of the meaning of the sentence and grammatical behavior such as transitivity, selectional restriction, and compatibility with *under-*. In the discussion that follows, I will also reveal the notion of "normal state" is an important and indispensable factor to evaluative judgements.

#### 3.1 *Objective norm of the capacity*

A first type of norm is objective norm determined by the permissible amount of the capacity. Let us consider the following examples.

- (20) a. The ship was overload with people.  
 b. They overbuilt the city.  
 c. John overate. (#John overate himself)

In (20a), the situation is that the quantity of the loaded entities, that is, people, is more than the limit of capacity of the ship. The sentence in (20b) means that so many

<sup>4</sup>This is pointed out in Kaga (1999).

buildings are built beyond the capacity of the city. Strictly speaking, (20b) is different from (20a) in dimension. *The city* in (20b) is construed as two-dimensional range while *the ship* in (20a) is three-dimensional container. In (20c), the quantity of eating is more than the capacity of the subject. *Overeat* historically takes a reflexive pronoun as a direct object though it is obsolete in modern English. In this example, the reflexive pronoun *himself* is co-referential with the subject *John*. Therefore, the limit of the capacity of the object noun *himself*, is equal to that of the subject *John*. It is natural to say that what defines the capacity of the human body (perhaps the capacity of his stomach in this case) is understood as a metaphorical container since internal organs cannot be perceived directly as a visual image.

Moreover, there are cases in which evaluation is based on a one-dimensional scale, that is, time axis. In general, the concept of time is understood as one-directional line.

- (21) a. The boss overslept the appointed time.  
 b. I am troubled, for he has overstayed his time. (CobuildDirect)

In (21a), the time of sleeping exceeds a limit (appointed time) on the time axis. *Overstay* in (21b) is the same type of verb. In these examples, the objects of the verbs are the norm of the evaluation. Time axis itself has no capacity since it is conceptually one-dimensional and has no measure or volume. Therefore, the given point on the time axis functions as the norm of excessiveness. The examples in (21) are different from the ones in (20) in this point.

In the examples such as (20), objects of the verbs designate the norm of evaluation at first glance. Each of them is in fact not a norm itself but the entity which determines the norm of evaluation according to its capacity. In (21), the objects of the verbs themselves designate the norm of excessive judgement. From the discussion so far, we can see the objects forming a continuum from the concrete three-dimensional entity to the abstract one-dimensional scale. The difference in dimension makes the difference in the way to express the norm. However, all of them have a decisive role in determining the norm. In other words, the norm in this type is objectively determined by the objects. Therefore, the noun which determines the norm must appear in the object position.

The verbs so-called *splay-load* type are included in this type. It is well known that they allow locative alternation. This phenomenon is originally pointed out in Fraser (1971: 607) and his example is the following.

- (22) a. They oversupplied the Indians with rifles.  
 b. \* They oversupplied rifles to the Indians.  
 (23) a. Harry overloaded the wagon with hay.  
 b. \* Harry overloaded hay onto the wagon.



- (24) a. She overplanted the garden with corn.  
 b. \* She overplanted the corn in the garden.

### 3.2 Subjective norm and the notion of normal State

A second type of norm is upper limit of the degree of activity. This type of norm is more subjective than the first type. Because it is the upper limit of the range which we feel desirable or tolerable, it depends on the subjective judgement of the speaker or the subject of the sentence.

- (25) a. John overheated the room.  
 b. He overtasks his workers everyday.  
 c. He overwalked his dog.

In (25a), the degree of heating is more than the limit of desirable degree. (25b) shows that the degree of tasking workers is undesirable. (25c) means that walking the dog goes too far.

The most important difference from the first type is that this type doesn't affect the selectional feature of the base verbs. Because the upper limit of degree largely depends on the context and the activity involved.

- (26) John overheated the room. It had a temperature of 0°C.

In the context of chemical experiments, we can use the sentence in (26) even if we do not feel hot. In this type, the norm of evaluation is drawn from general knowledge. It cannot be expressed by a specific noun. This is the reason why this case doesn't change transitivity or selectional restriction.

Next, let us consider the examples with a verb *oversing*.

- (27) a. And when the drums roll and the steel guitars rock on toe-tappers like "How Was I Know" and "She's Callin' It Love," she resists the urge to oversing.  
 b. \* Mary oversings herself.  
 c. \* Mary oversings that song every time.

In (27a), *oversing* is intransitive and means "sing too loud." The act of singing is more than the upper limit of the desirable degree. If the assumption that the transitivity of verbs of this type are not changed is correct, We can safely assume *oversing* is derived from the intransitive use of *sing*. It is supported by the fact that its transitive use is not allowed as in (27b) and (27c). It cannot take any object whether it is a reflexive pronoun or the noun which means that the song being sung.

A third type of norm is a *normal state* of the activity. This is highly subjective than the first two types. The notion of normal state is first introduced by Clark (1974). She uses this notion to explain the idiomatic expressions with deictic motion verbs *come* and *go*. To put it briefly, *come* means a movement to the unmarked state and *go*

means a movement to the marked state in the idiomatic expression respectively. This unmarked state is a evaluated state, that is, good, desirable, or comfortable. When we use our language, we unconsciously assume the thing which is evaluated in advance to making an evaluative judgement. It is not an idiosyncratic aspect but a pervasive one in languages. Though her analysis is criticized by Radden (1996), etc. because many exceptions of her hypothesis can be found. But the idea of normal state seems to be still valid in the explanation of evaluative expressions in general.<sup>5</sup> She mentions that the normal state involves a variable and it may be different from culture to culture. But the degree or type in the normal state does not matter. What is relevant for us here is that the prefix *over-* which means a marked state use the normal state as a reference point to fix a value of evaluation.

An important difference of this type is that prefix *under-*, opposite of *over-*, can be connected in order to express opposite meaning. This is because of the difference of the norm. The norm in this type is different from the first one and the second one in the way of comparison. The first and the second type of norm is on the unidirectional scale in which a matter of comparison is only the amount increasing. Normal state is not an limit determined according to the capacity of container but an arbitrary point or a range set on a comparative scale. Therefore, the scale is bidirectional and the value lower than the norm is the matter of comparison. This type also does not affect the selectional restriction of the base verbs.

(28) a. The actress {overacted/underacted} her part.

b. I think you are {overestimating/underestimating} his ability.

In (28a), the act is done exaggeratedly or insufficiently. In (28b), the value of estimation is more than, or less than, expected. As the sentence itself shows, to say *overestimate* or *underestimate* something is the evidence that speaker's norm of the estimation is different from the one of the other's. Therefore, to repeat again, the norm of this type is highly subjective.

From the discussion so far, we can draw an assumption that the norm of evaluation is not homogeneous but heterogeneous. According to which type of norm is used, the patterns of grammatical behavior of *over-* + V is divided into three groups.

Firstly, dividing the difference between the first type of norm and the other two types, that is, subjective norm and objective norm, is useful to explain the difference of selectional restriction. Secondly, to distinguish the third type of norm from the first and second type in directionality of scale is valid for explaining the combinability with *under-*.

The grammatical behavior concerning the prefixation of *over-* is not homogeneous

<sup>5</sup> Kasai (1998) also notes that the notion of evaluated state (place) applies to English words such as *place*, *value*.

but heterogeneous in present-day English. To say roughly, excessive *over-* is divided into two types. One is the strong type which imposes the selectional restriction and the other is the weak type which does not have such restriction. It suggests that *over-* has changed from the strong type to the weak type. In the next section, the possibility of such grammatical change taking up two particular words *overbuild* and *overeate*.

### 3.3 A case study of *overbuild* and *overeate*

As I have seen in section 2.3, Yumoto (1997) points out that *overbuild* cannot take as its direct object the Theme that the base verb *build* can take. In fact, however, there are cases where *overbuild* can co-occur with such an NP.

The examples in (30) take Theme as a direct object of *overbuild*. It must be noted that the meaning of *overbuild* in (30b) is different from (29b). In this sentence, *overbuild* means “to make something too big”.

- (29) a. He built a house in the city.  
 b. They overbuilt {the city/\*houses}.
- (30) a. We could easily build the boats here, although we would need some additional experience.  
 b. In contrast, when companies that have built 200-foot yachts—like that which builds the *Léopard*—set out to build a 75-foot day boat, they approach it from the standards of large ocean-going vessels. Such companies, contends Chahine, are more likely to overbuild the boat.

(30a) indicates the verb *build* takes a Theme, *the boat*, as direct object. In (30b), *overbuild* can take the same noun as (30a). In addition, an example like (31) is also found.

- (31) In retrospect NASA and Congress appear to have overbuilt the launch complex.

These example suggests a possibility of explanation for the change of the constraint of prefixation.

As we have seen so far, *overeate* cannot take Theme as its direct object. But there are some special cases in which *overeate* can take Theme as its direct object, as in (32c) and (32d).

- (32) a. John overeate.  
 b. \* John overeate apples.  
 c. ...people who overeate spicy foods. (COBUILD)  
 d. The fat balance explains in part why settling points vary among people who overeate fat: ...

In (32c) and (32d), *overeate* takes a noun phrase conceived as Theme. Both of the examples happen to have the same grammatical form, that is, a relative clause and a

generic expression.

How these grammatical environments affect the possibility of taking Theme as a direct object is not argued in detail because it is beyond the scope of this paper. But the fact suggests a special environment makes it possible to change the selectional restriction of *overeate*.

Though they are the spacial case, the examples above suggests that *overeate* has also changed from the strong type into the weak type. In other words, *over-* does not change the transitivity of the base verb *eat*. My assumption in this study is available to such grammatical change. This is supported by the following example.

- (33) She thought she overate though she hadn't eaten very much. She was on a diet.

This sentence means that *overeate* does not necessarily imply the limit of a container. In this sentence, the norm of evaluation is desirable degree of eating, that is, not the objective norm but the subjective norm. This is confirmed by the fact that the example in (34) is not allowed.

- (34) \* Though it had lots of unoccupied seats, the ship was overloaded with people.

The verb *overload* is based on the norm which is determined according to the upper limit of the container, i.e., *the ship*. Since the norm is defined objectively by the capacity of the ship, it is invariable. On the other hand, the norm of *overeate* is determined subjectively by the subject of the sentence. In section 3.1, I regard *overeate* as the word which is based on the objective norm. However, I suppose that it has changed into the type based on the subjective norm. The norms of *overeate* and *overload* are not the same and the difference of the norm is reflected in the difference in acceptability between the sentences in (33) and (34). This observation supports the idea of classifying the norms in the previous sections.

As I mentioned above, the verb *overeate* historically takes reflexive pronoun as its direct object. But it is an obsolete use in present-day English. As a result of such a process, *overeate* seems to be an intransitive verb superficially since transitive use like (32b) are not allowed as yet. Once such a use is fixed, it spreads to other words.

- (35) a. He dosed himself with Valium to calm his nerves.  
 b. She overdosed on aspirin and died. (CIDE)  
 c. He overdosed on heroin. (LDOCE)

The examples in (35) show that *overdose* is intransitive and does not take a direct object while the base verb is transitive and it takes a reflexive pronoun as its direct object. (36) is an example of intransitive use, too.

- (36) You've been overworking - why don't you take a week off?

As for the grammatical phenomenon of *overeat*, Miyata (1996) points out that it cannot enter into the resultative construction as in (37).

- (37) a. She ate herself sick.  
 b. \* She overate herself sick.

(37b) is not acceptable because *over-* has the same meaning as the resultative construction itself. Therefore, to attach *over-* to the construction is redundant. Though this phenomenon has a great importance to the nature of prefixation, it is not discussed precisely here.

From the observation in this section, we can suggest that the verbs *overeat* and *overbuild* have diachronically changed from the verbs based on the objective norm into the verbs based on the subjective norm. It means that the prefix *over-* have changed from the type which imposes the transitivity on the base verbs to the one which does not affect the transitivity.

#### 3.4. Asymmetry between *over-* and *under-*

As we have seen in section 2.2, there is a difference in the possibility of combination with verbs between *over-* and *under-*. Because some verbs like *excite* and *dry* contain a notion of threshold, event itself is not realized if the threshold is not realized. So they conform only to *over-*. From this fact, we can assume that verbs like *achieve*, which are end-point oriented, conform only to *under-*. For example, *graduate* is such a verb and we can say *undergraduate* but not say \**overgraduate* since the subject of the predicate *graduate* denotes people who do not arrive at the stage of graduation. However, this assumption is not correct.

- (38) They consistently underachieve at school and demonstrate little desire to make headway along a career avenue to success.

In this sentence, a record at the school is not enough for the point of achievement. The norm of evaluation is not the point of finishing. The evaluation represented by the verb is based on the normal state, so it is possible to attach *over-*, as in (39).

- (39) David continued to 'overachieve' all through high school, college and a distinguished law school.

The possibility of the prefixation is not based on the type of verb but what kind of norm, which fixes the value of evaluation, is assumed behind the comparison.

- (40) a. ... if everything you've tried has either overdone or underdone its job, why not re-think your approach.  
 b. I don't want to underbuy but not overbuy, either.

In these examples, the norm of evaluation is the range that we feel normal or desirable. So the possibility of *under-* prefixation depends on whether the event expressed by the base verb conforms to the comparison based on the norm of normal state or not.

#### 4. Concluding remarks

In this paper, I examined how the prefixation causes the complex grammatical phenomena, that is, change of transitivity, selectional restriction, and combinability with *under-*. I proposed that norms of evaluative judgements are classified into three types. I conclude that such phenomena caused by the prefixation is based on the difference of the norms of evaluation.

#### REFERENCES

- Bauer, Laurie. (1983) *English Word-formation*. Cambridge University Press, Cambridge.
- Brugman, Claudia. (1980) *The Story of Over: Polysemy, Semantics, and the Structure of the Lexicon*. Garland publishing, New York.
- Clark, Eve V. (1974) "Normal States and Evaluative Viewpoints." *Language* 50, 316-332.
- Dewell, Robert B. (1994) "Over again : Image-schema Transformations in Semantic Analysis." *Cognitive Linguistics* 5, 351-380.
- Fraser, Bruce. (1971) "A Note on the *Spray Paint* Cases." *Linguistic Inquiry* 2, 604-607.
- Kaga, Nobuhiro. (1999) "Ringo wa naze tabesugirarenaika." *Report of the Special Research Project for the Typological Investigation of Languages and Culture of East and West*, University of Tsukuba.
- Kageyama, Taro and Yumoto Yoko. (1997) *Gokeisei to gainen kouzou*. Kenkyusha, Tokyo.
- Kasai, Ryoji. (1996) "Kachi hyooka no imiron." *Chuo daigaku bungakubu bunngakuka kiyoo* vol. 171. Chuo University.
- Kreitzer, Anatol. (1997) "Multiple Levels of Schematization: A Study in the Conceptualization of Space." *Cognitive Linguistics* 8, 291-325.
- Lakoff, George. (1987) *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind*. University of Chicago Press, Chicago.
- Lakoff, G. & Mark Johnson. (1980) *Metaphors We Live By*. University of Chicago Press, Chicago.
- Levin, Beth and Malka Rappaport Hovav. (1995) *Unaccusativity: At the Syntax-Lexical Semantics Interface*. The MIT Press, Cambridge, Massachusetts.
- Marchand, Hans. (1969) *The Categories and Types of Present-day English Word-formation* 2nd edition, München.
- Miyata, Akiko. (1996) *Cognitive Constraints on Resultative Construction in English*. M.A. Thesis, University of Tsukuba.
- Nakau, Minoru. (1994) *Ninchi imiron no genri* ( The Principle of Cognitive Semantics). Taishukan, Tokyo.

- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik. (1985) *A Comprehensive Grammar of the English Language*. Longman.
- Radden, Günter. (1996) "Mortion Metaphorized: The Case of *coming* and *going*." *Cognitive Linguistics in the Redwoods*. Mouton de Gruyter, New York.
- Roeper, Thomas & Siegel Muffy E. A. (1978) "A Lexical Transformation for Verbal Compounds." *Linguistic Inquiry* 9, 192-260.
- Williams, Darrell. (1993) "English Comparative Compounds with OVER, UNDER, and OUT." *ESCOL '92*, 272-281.
- Yamada, Shoichi (1999) *A Semantic Study of the Prefixes over- and under- in English*. M.A. Thesis, University of Tsukuba.
- . (to appear) "Settoji *over-* no kuukanteki imito teidoteki imini kansuru ichi koosatsu."
- Yumoto, Yoko. (1997) "Verbal Prefixation on the Level of Semantic Structure." In Taro Kageyama (ed.) *Verb Semantics and Syntactic Structure*, 177-204. Kurosio Publishers, Tokyo.

### Dictionaries

- CIDE: Cambridge International Dictionary of English*. (1995), Cambridge University Press, Cambridge.
- COBUILD: Collins COBUILD English Dictionary* (2nd edition). (1995), Harper Collins Publishers, London.
- LDOCE: Longman Dictionary of Contemporary English* (3rd Edition). (1995), Longman,
- OALD: Oxford Advanced Learner's Dictionary of Current English*. Fifth edition. (1996), Oxford University Press, Oxford.

Doctoral Program in Literature and Linguistics  
 University of Tsukuba  
 e-mail: sho-yamada@pop06.odn.ne.jp